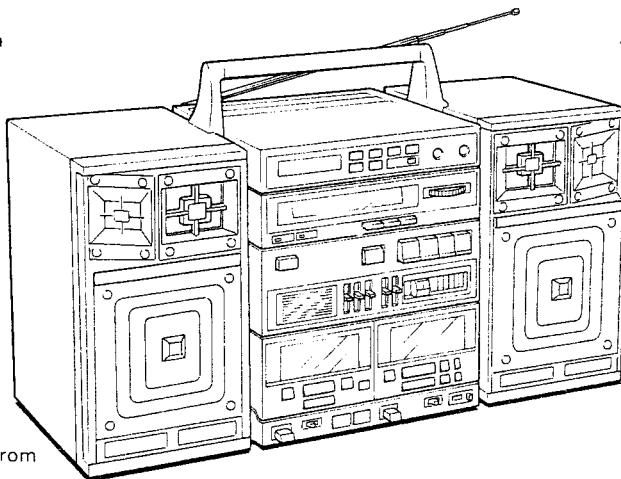


SERVICE MANUAL

AEP Model
UK Model



Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

CONTENTS

FH-55W	<i>Page</i>
SPECIFICATIONS	2
FEATURES	3
MODEL IDENTIFICATION	3
FUNCTION OF CONTROLS	4
CONNECTOR'S SIGNAL ASSIGNMENT	7
EXPLODED VIEW AND PARTS LIST	8

WARNING !!

ADVARSEL!

Lithiumbatteri – Eksplosionsfare
Udskiftning må kun foretages
af en sagkyndig, og som
beskrevet i servicemanualen.

LITHIUM BATTERY

SHOULD ONLY BE CHANGED BY TECHNICAL PERSONNEL. THERE IS A RISK FOR EXPLOSION AT A WRONG HANDLING.

"Batteriet må kun udskiftes med et batteri af samme fabrikat og type".

Because of the risk for explosion the battery must be replaced with the same type and manufacture.

STR-55D	<i>Page</i>
1. BLOCK DIAGRAM	STR-1
2. DISASSEMBLY	STR-3
3. DIAL POINTER REINSTALLATION ..	STR-5
4. ADJUSTMENTS	STR-6
5. MOUNTING DIAGRAM	STR-9
6. SCHEMATIC DIAGRAM	STR-13
SEMICONDUCTOR LEAD LAYOUTS	STR-16
7. EXPLODED VIEWS AND PARTS LIST	STR-17
8. ELECTRICAL PARTS LIST	STR-20

— Continued on page 2 —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

COMPACT HI-DENSITY
COMPONENT SYSTEM
SONY[®]



MICROFILM

AUD

	<i>Page</i>
TC-55W	
REPAIRING PRECAUTION	TC-2
SECTION 1 BLOCK DIAGRAM	TC-3
SECTION 2 DISASSEMBLY	TC-5
SECTION 3 ADJUSTMENTS	
3-1. MECHANICAL ADJUSTMENTS	TC-9
3-2. ELECTRICAL ADJUSTMENTS	TC-10
Semiconductor Lead Layouts	TC-13
SECTION 4 DIAGRAMS	
4-1. MOUNTING DIAGRAM	TC-14
4-2. SCHEMATIC DIAGRAM	TC-19
-SYSTEM CONTROL SECTION-	
4-3. SCHEMATIC DIAGRAM	TC-23
-AUDIO SECTION-	
SECTION 5 EXPLODED VIEWS AND PARTS LIST	TC-27
SECTION 6 ELECTRICAL PARTS LIST	TC-30

SPECIFICATIONS

STR-55D FM stereo/FM-AM receiver

FM tuner section

Tuning range 87.5 - 108 MHz

Antenna Telescopic antenna

Antenna terminal 75-ohm unbalanced

Intermediate frequency 10.7 MHz

Usable sensitivity 3 μ V (S/N = 30 dB/75-ohm)

Signal-to-noise ratio 75 dB (mono)

70 dB (stereo)

Harmonic distortion at 1 kHz 0.5% (mono)

1% (stereo)

Separation at 1 kHz 40 dB

Selectivity 55 dB at 400 kHz

MW/LW tuner section

	MW	LW
Tuning range	522 - 1,611 kHz	144 - 288 kHz
Antenna	Built-in ferrite bar antenna, External antenna terminal	
Intermediate frequency		450 kHz
Usable Sensitivity	Built-in ferrite bar antenna 250 μ V/m (999 kHz)	500 μ V/m (230 kHz)
External antenna	100 μ V (999 kHz)	150 μ V (230 kHz)
Signal-to-noise ratio	52 dB (50 mV/m)	
Harmonic distortion	0.5% (50 mV/m. 400 Hz)	
Selectivity	30 dB (9 kHz)	40 dB (9 kHz)

Amplifier Section

Continuous RMS power output

18 + 18 watts
(4-ohm, 40 Hz - 20 kHz, 1% THD)
25 + 25 watts
(4 ohms, 1 kHz, 5% THD)

DC operation (with the EBP-86 or car battery)

3.5 W + 3.5 W (1 kHz, 5% THD)

Inputs	Sensitivity	Impedance
PHONO (phono jacks)	2.5 mV	50 k-ohm
CD/AUX (phono jacks)	250 mV	50 k-ohm
MIC (phone jack)	1 mV	Low impedance

Outputs

PREOUT (phono jacks)	Voltage 250 mV, impedance 4.7 k-ohm
HEADPHONES (stereo phone jack)	Accepts headphones of 8-ohm or more
SPEAKER	Accepts speakers of 4 - 16-ohm

Frequency response

PHONO: RIAA curve ± 0.5 dB
CD/AUX: 40 Hz - 30 kHz ± 3 dB
MIC: 100 Hz - 10 kHz ± 3 dB

General

Dimensions

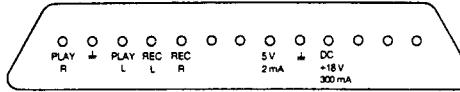
Approx. 215 x 165 x 220 mm (w/h/d)
(8 1/2" x 6 1/2" x 8 1/4" inches)

incl. projecting parts and controls

Weight

Approx. 3.4 kg (7 lb 8 oz) net

13-pin DC output connector of STR-55D to TC-55W



APM-117D

	<i>Page</i>
1. DISASSEMBLY	APM-1
2. WIRING DIAGRAM	APM-1
3. EXPLODED VIEW AND PARTS LIST	APM-1

Page

	<i>Page</i>
APM-1	APM-1
APM-1	APM-1
APM-1	APM-1

FEATURES

Compact hi-density component system

Consists of an FM stereo/FM-AM receiver and a high quality double cassette deck, which are securely connected by a flat connecting cord.

Receiver section

- Amplifier with power output of 25W + 25W (1 kHz, 5% THD)
- High sensitivity and high selectivity tuner
- Dynamic Optimum Loudness (DOL) button to emphasize bass sound.
- Includes a digital timer for awakening and sleeping to radio or taped program, a 3-band graphic equalizer for both recording and playback with 3-band spectrum analyzer

Double cassette deck

- Deck A for playback only and deck B for recording and playback
- One side of the cassette can be duplicated either at normal or high speed
- Automatic tape select system
- Automatic Music Sensor (AMS) and blank skip function button for both decks A and B
- Relay play of two cassettes

3-way speaker system with APM woofer

By installing speaker boxes in the appropriate position, the localization of the sound can be arranged to fit your listening situation.

Three different power sources

House current, car battery and batteries (with an optional battery case)

Note: The timer function does not operate when the system is operated on batteries. The dial scale and the spectrum analyzer display are not lit in this case.

• AEP model except for G-AEP, UK model

SONY® MODEL NO. STR-55D

FM STEREO/FM-AM RECEIVER

AC:



SERIAL NO.
MADE IN JAPAN

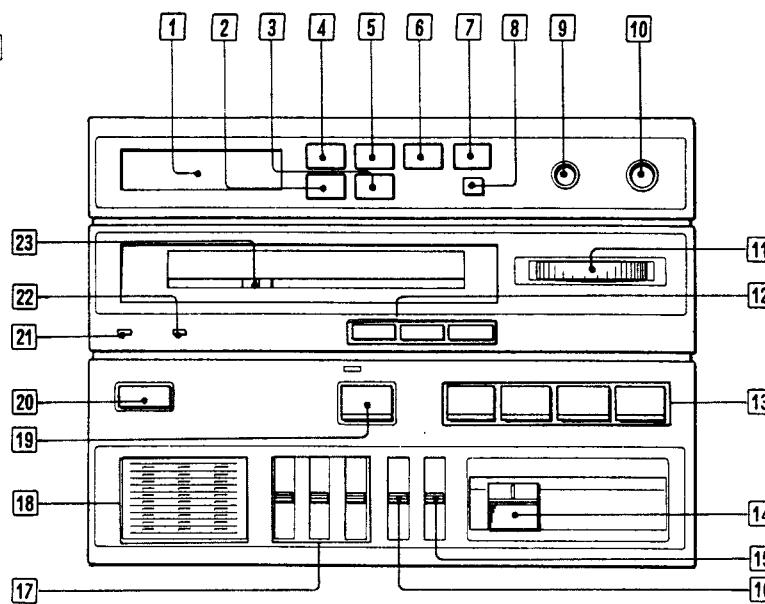


AEP model: 220V~50/60Hz 65W

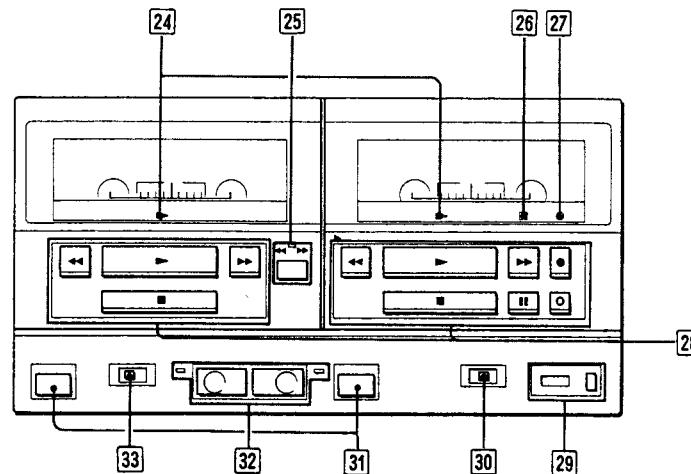
UK model: 240V~50Hz 125W

FUNCTION OF CONTROLS

STR-55D



TC-55W



STR-55D FM Stereo/FM-AM receiver

① DIGITAL TIMER display

Lights when the FH-55W is turned ON during AC operation.

② SLEEP SET button

While keeping this button depressed, push the MINUTE button to set the sleep timer. The digits on the DIGITAL TIMER display are reduced by one from 64. The power will be turned off automatically after the preset time has elapsed.

③ SLEEP OFF button

Press this button to turn off the sound before the preset time.

④ TIME SET button

Keep this button depressed to set the current time.

⑤ HOUR button

Press this button while holding the TIME SET button depressed to set the hour on the DIGITAL TIMER display. Each time the button is pressed, the digit on the display advances by one. The digit also advances automatically while keeping this button depressed.

⑥ MINUTE button

Press this button while holding the TIME SET button depressed to set the minute on the DIGITAL TIMER display. Each time the button is pressed, the digit on the display advances by one. The digit advances automatically by five while keeping this button depressed. Instantaneously when the digits are changed, the displayed digits indicate 00 seconds.

⑦ ALARM SET button

While keeping this button depressed, push the HOUR and MINUTE buttons to set the alarm time. Push this button to check the preset alarm time. The alarm time will appear on the display.

⑧ REPEAT ALARM/ALARM OFF button

Lock this button by depressing it to set the alarm time. The alarm mark (●) appears on the display. Release the button by depressing it again to cancel the alarm setting.

⑨ HEADPHONES jack (stereo phone jack)

⑩ MIC (microphone) jack (phone jack)
Connect a microphone for microphone mixing.

⑪ TUNING control

Turn the control to tune in the desired station.

⑫ BAND SELECT buttons

Press to select the desired band. FM, MW and LW bands are provided.

⑬ FUNCTION Select buttons
TAPE button

Press this button to listen to a taped program.
CD (compact disc)/AUX (auxiliary) button

Press to listen to or record compact disc or auxiliary programs connected to the CD/AUX inputs.
TUNER button

Press this button to listen to or record broadcast programs.
PHONO button

Press to listen to or record record programs connected to the PHONO inputs.

⑭ VOLUME control

Regulates the overall sound level.

⑮ MIC LEVEL (microphone level) control

Controls the input level of the microphone. Slide the control towards MAX to increase microphone level and towards MIN to decrease it. When not in use for microphone mixing, set this control to the MIN position.

⑯ BALANCE control

Adjusts the balance of the left and right channel output levels.

⑰ GRAPHIC EQUALIZER controls

To equalize the listening or recording sound, slide each control upwards to increase the level of the frequency band, and downwards to decrease the level.
100 Hz : Use to boost or cut the bass.

1 kHz : Use to provide more presence of vocals.

10 kHz : This control effects general treble. Slide downwards to reduce high frequency noise, such as tape hiss.

To record or listen to the sound with the original tone quality, set all the controls at their center positions.

⑱ SPECTRUM ANALYZER display

This is a 3-division real time spectrum analyzer, and the frequency band is the same as that of the graphic equalizer.

⑲ DOL (Dynamic Optimum Loudness) button and Indicator

Press to obtain powerful bass sound at small output level.
The indicator illuminates to show that this switch is effective for reproduced bass sound.

⑳ POWER switch

㉑ STEREO indicator

Lights when an FM stereo program of sufficient signal strength is tuned in.

㉒ TUNED indicator

Lights when a station is tuned in.

㉓ Dial scale

Lights when the FH-55W is turned ON during ac operation.

TC-55W Stereo cassette deck

24 ► (play) indicators**25** AMS (Automatic Music Sensor)/BLANK SKIP button and indicator (deck A/B)

Press to activate the AMS function or blank skip function. To deactivate, press the button again.

26 II (pause) indicator (deck B)

The indicator blinks just after the power is turned on and during record muting.

27 ● (record) indicator (deck B)**28** Tape operation mode select buttons

◀ (rewind)

► (play)

▶ (fast forward)

■ (stop)

II (pause)

Press to stop the tape momentarily during recording or playback. To disengage pause mode, press it again.

● (record) button (deck B)

Press the ● button together with the ▶ button to start recording.

O (record muting) button (deck B)

Press the button to eliminate unwanted material and insert a blank space for approx. four seconds on a tape (for AMS function) during recording and then set the deck in pause mode.

More than four seconds of blank space can be inserted by keeping this button depressed.

29 TAPE COUNTER and RESET button(deck B)

The TAPE COUNTER provides a numerical reference point.

To reset to zero, press the RESET button.

30 TIMER standby switch(deck B)

Normally set to OFF.

To start recording or playback automatically, set to REC or PLAY.

31 EJECT buttons

Press to open the cassette holders.

32 SYNCHRO DUBBING buttons and indicatorsPress the appropriate button to select the dubbing speed. **NORMAL:** For normal speed dubbing.

As AMS/BLANK SKIP button, O (record muting) button and II (pause) button are effective, this position is useful for tape editing.

HIGH: For high speed dubbing.

This position is useful to dub the whole cassette.

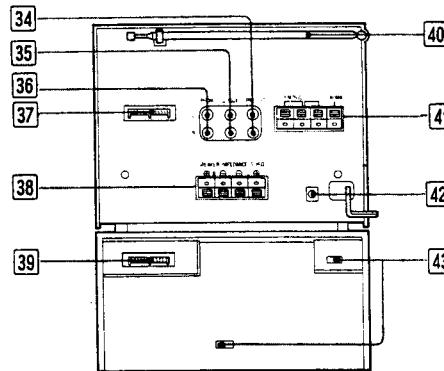
33 DOLBY NR switch*

Sets the Dolby NR (Noise Reduction) switch to be used for recording or playback.

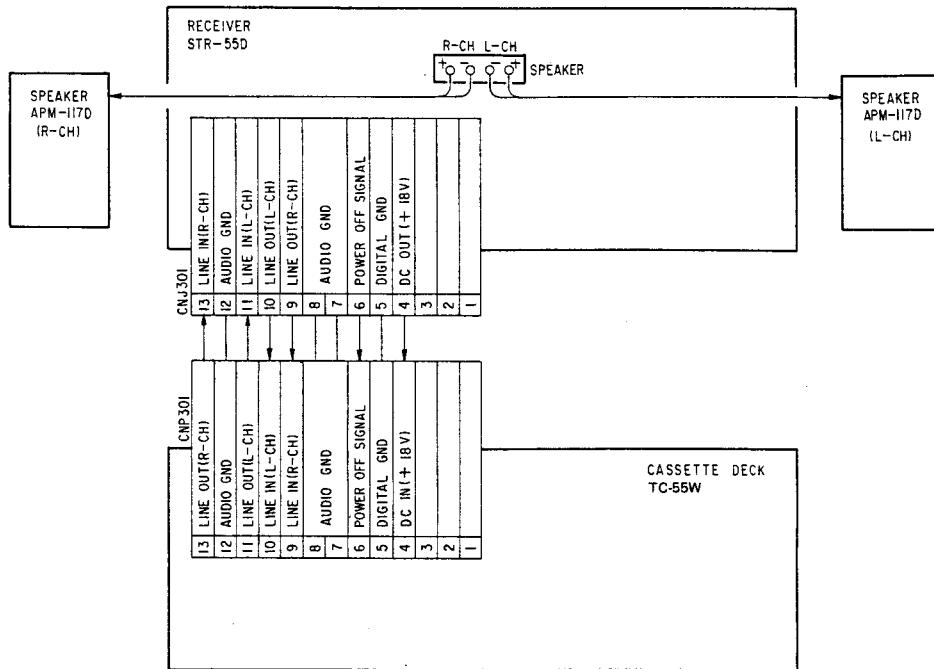
OFF: To record or play back without the Dolby NR process.**ON:** To record or play back with the Dolby NR process.

* Dolby and the double-D symbol are trade marks of the Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

Rear panel



CONNECTOR'S SIGNAL ASSIGNMENT

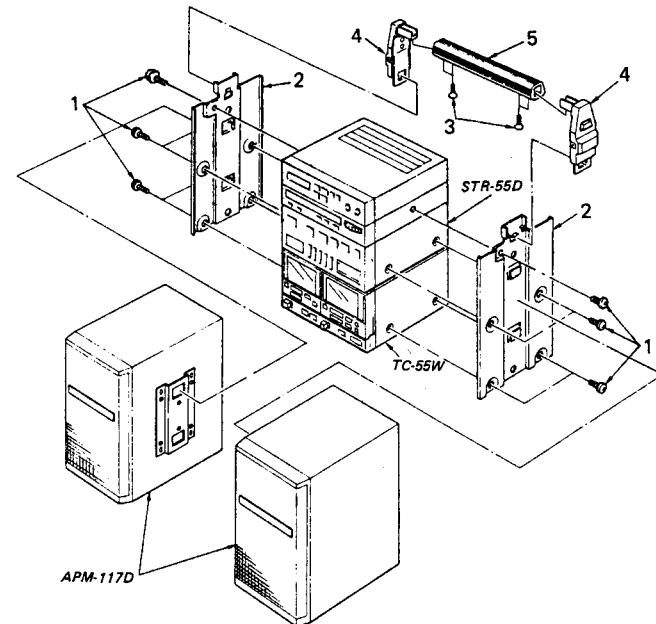


EXPLODED VIEW AND PARTS LIST

NOTE:

The mechanical parts with no reference number in the exploded views are not supplied.

Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.



GENERAL SECTION

No.	Part No.	Description
1	X-4915-501-1	DAG ASSY, STOPPER SCREW
2	4-910-051-11	PLATE (C), SIDE
3	7-685-247-29	SCREW *KTP 3X10 TYPE2 SLIT
4	X-4910-069-1	BRACKET ASSY, HANDLE
5	2-249-402-21	HANDLE

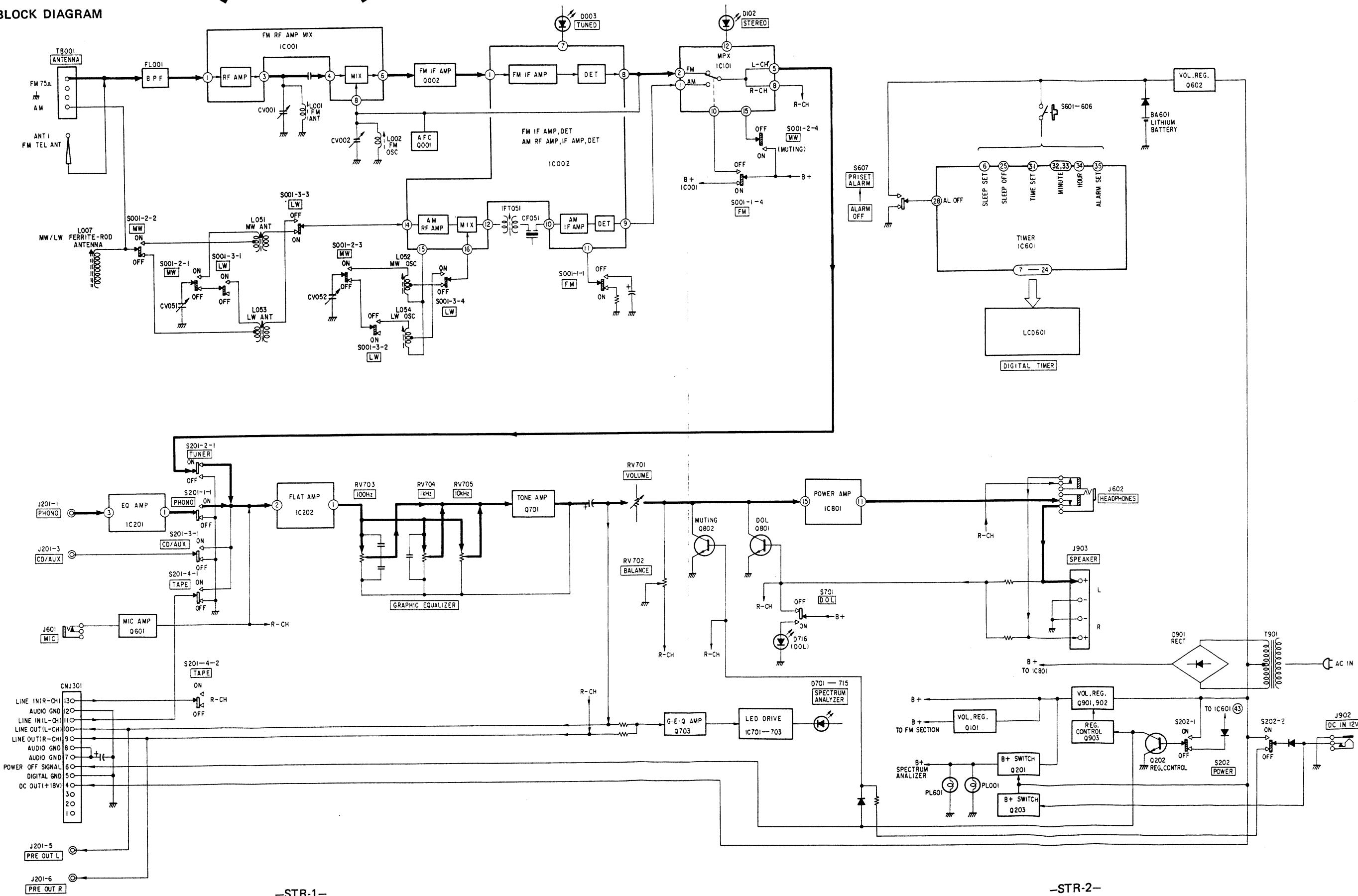
ACCESSORY & PACKING MATERIAL

Part No.	Description
1-558-567-11	CORD (WITH CONNECTOR)
3-701-613-00	BAG, POLYETHYLENE (for CUSHION (F))
3-701-630-00	BAG, POLYETHYLENE (for printed matter,CORD)
*3-764-430-01	(G-AEP)...INSTRUCTION, DDP CAUTION
3-765-101-11	(AEP,UK)...MANUAL, INSTRUCTION
3-765-101-41	(AEP).....MANUAL, INSTRUCTION
3-765-101-51	(G-AEP)....MANUAL, INSTRUCTION
4-915-501-11	INDIVIDUAL CARTON
4-915-503-01	CUSHION, UPPER
4-915-504-01	CUSHION, LOWER
9-911-842-X1	CUSHION (F)
3-536-080-00	(STR-55D)...BAG, POLYETHYLENE
3-881-644-00	(TC-55W)....PROTECTION BAG
4-910-323-01	(APM-117D)...SHEET, PROTECTION
4-910-324-01	(APM-117D)...CUSHION, LOWER
4-910-353-01	(APM-117D)...CUSHION, UPPER

FM STEREO/FM-AM RECEIVER [STR-55D]

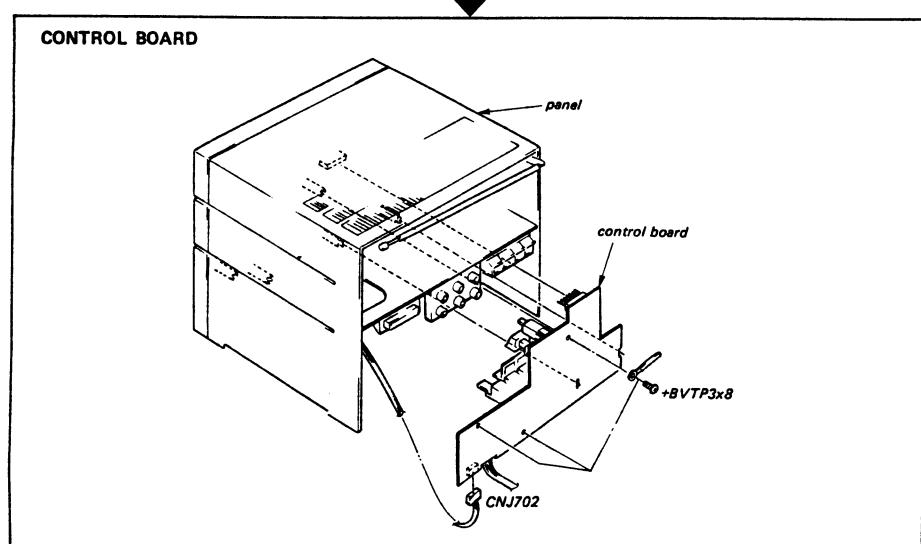
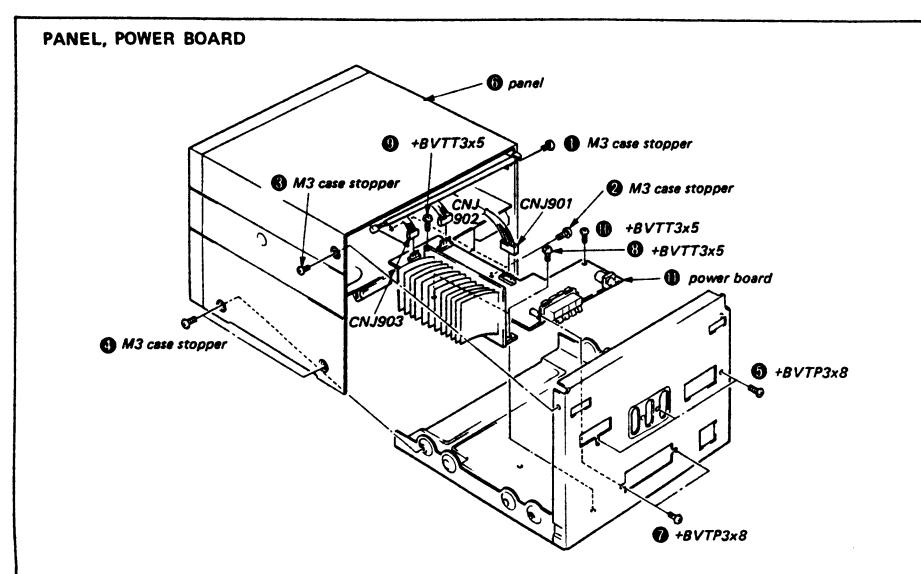
FH-55W
STR-55D FH-55W
STR-55D

1. BLOCK DIAGRAM



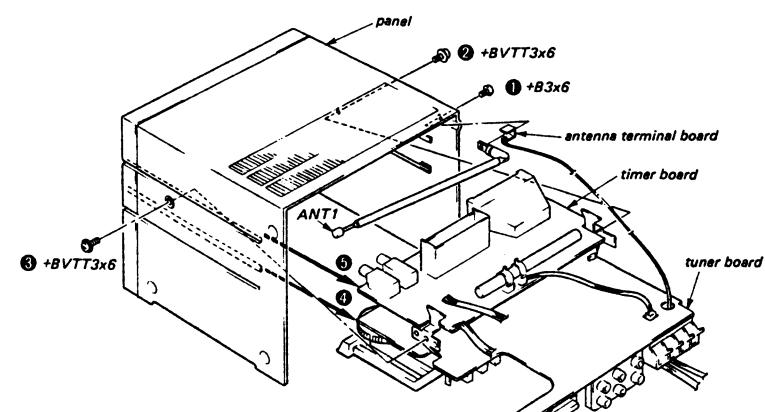
2. DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.



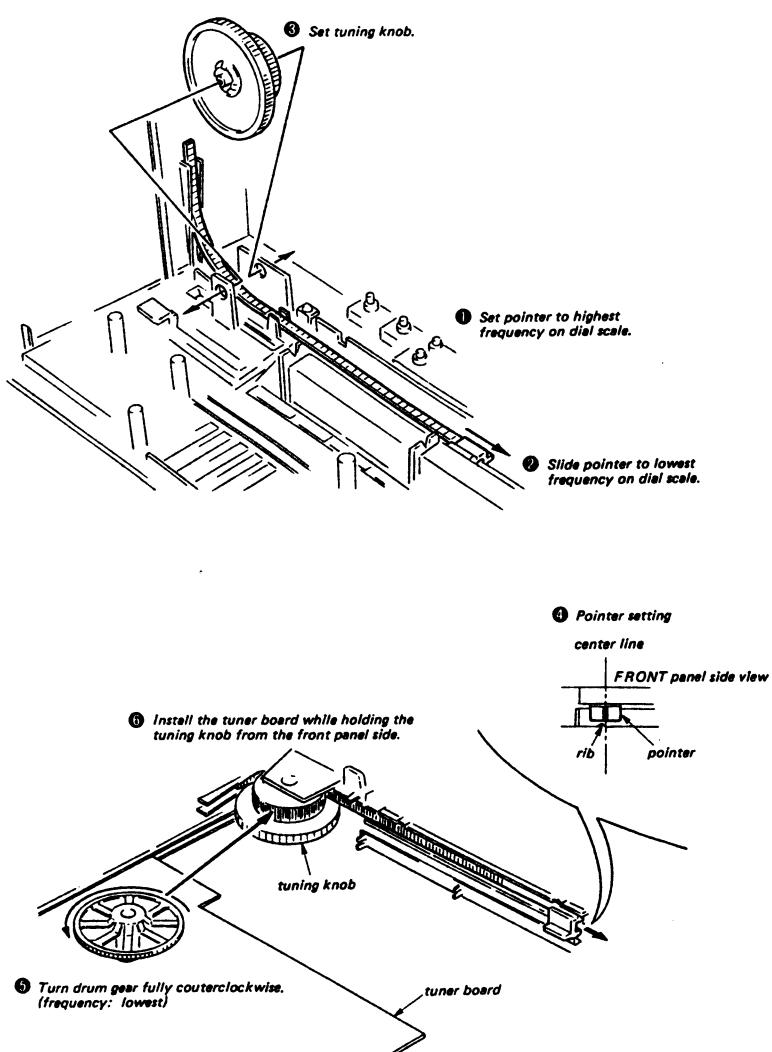
-STR-3-

TIMER BOARD, TUNER BOARD



-STR-4-

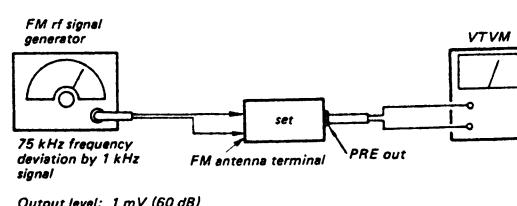
3. DIAL POINTER REINSTALLATION



-STR-5-

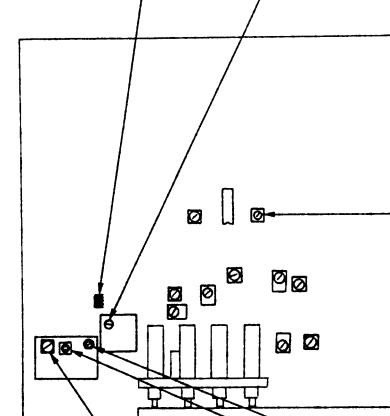
4. ADJUSTMENTS

FM Section

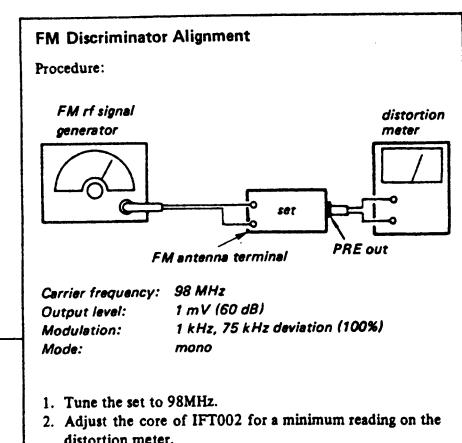


- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM	
90 MHz	106 MHz
L001	CT031



IFT001	Adjust for a maximum reading on VTVM.
FM IF ALIGNMENT	



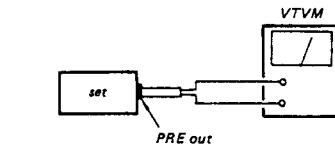
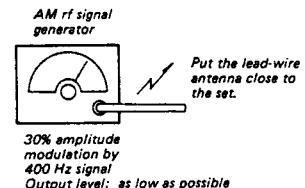
CT002	109.5 MHz
L002	87.1 MHz
Adjust for a maximum reading on VTVM.	
FM FREQUENCY COVERAGE ADJUSTMENT	

-STR-6-

FH-55W
STR-55D

FH-55W
STR-55D

MW Section

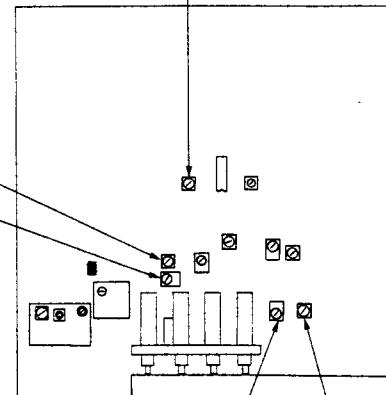


- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM IF ALIGNMENT

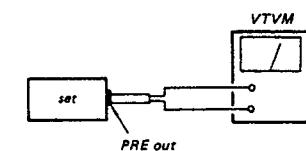
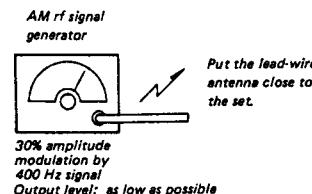
Adjust for a maximum reading on VTVM.
1,000 kHz
IFT051

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
1,400 kHz	600 kHz
CT051	L051



CT052	L052
1,634 kHz	514 kHz
Adjust for a maximum reading on VTVM.	
MW FREQUENCY COVERAGE ADJUSTMENT	

LW Section

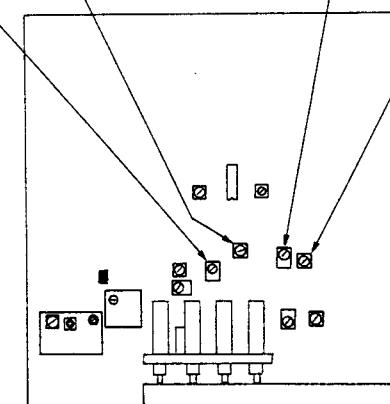


- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

LW TRACKING ADJUSTMENT

Adjust for a maximum reading on VTVM.
270kHz 170kHz
CT053 L053

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
296kHz	136kHz
CT054	L054



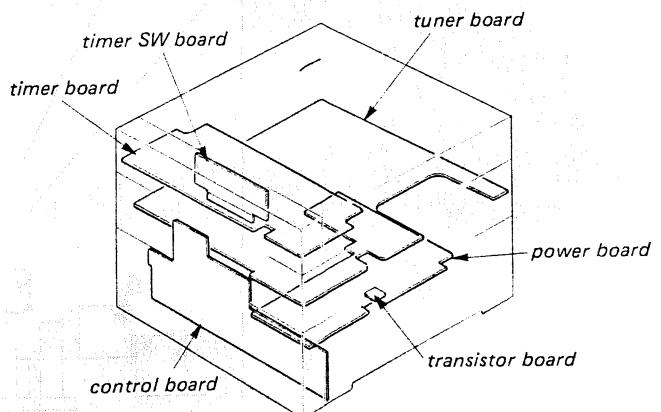
5. MOUNTING DIAGRAM

Note: See page "STR-16" for semiconductor lead layouts.

Semiconductor Location

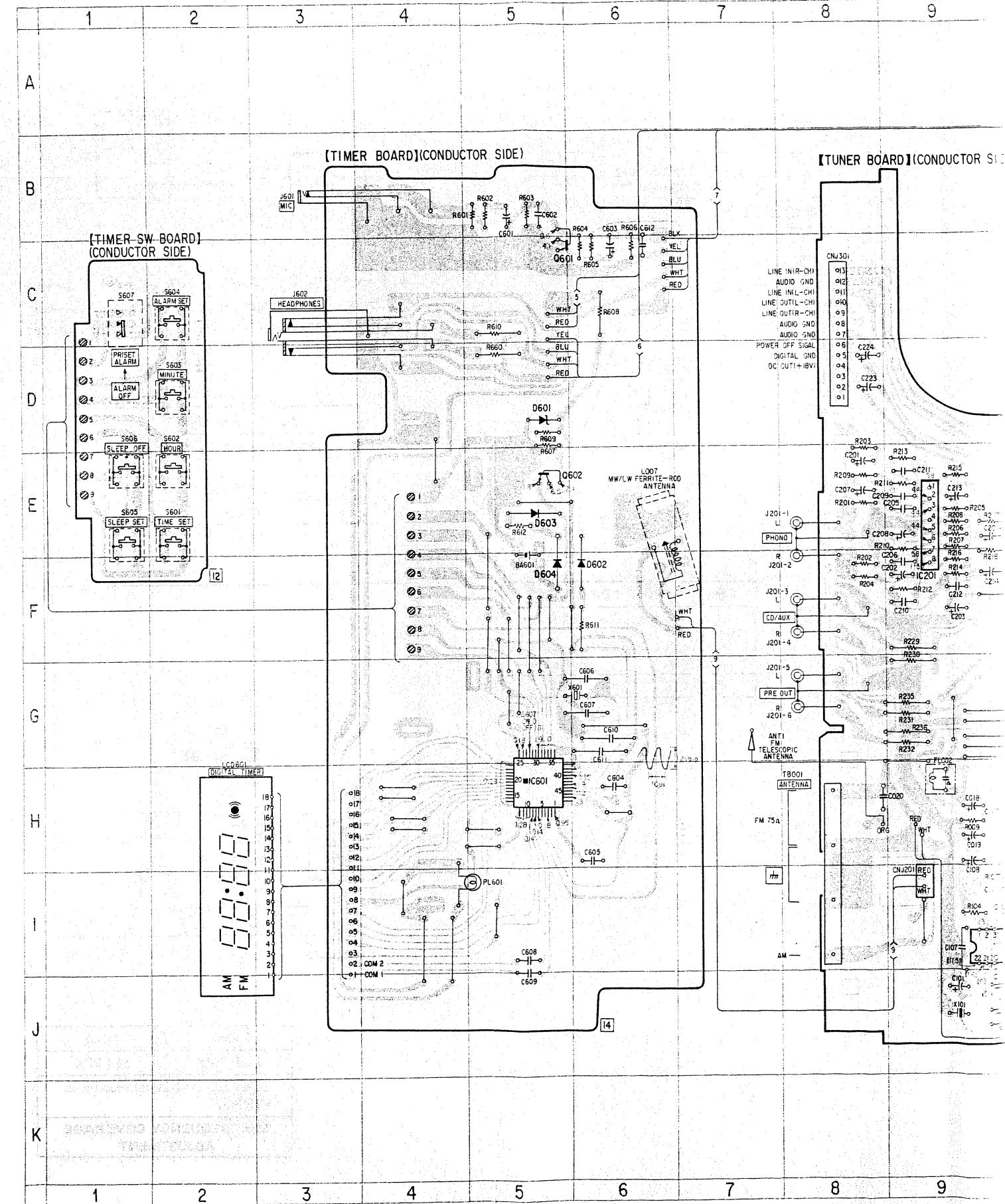
Ref. No.	Location	Ref. No.	Location
D001	C-14	IC001	C-14
D002	G-11	IC002	F-11
D003	I-15	IC101	I-10
D004	F-12	IC201	F-9
D101	J-11	IC202	G-11
D102	J-15	IC601	H-5
D601	D-5	IC701	C-17
D602	F-6	IC702	C-18
D603	E-5	IC703	C-18
D604	F-5	IC801	J-24
D701	B-18	Q001	C-15
D702	B-18	Q002	C-16
D703	C-18	Q101	D-16
D704	C-18	Q201	J-14
D705	C-18	Q202	I-12
D706	B-18	Q203	J-14
D707	B-18	Q601	C-5
D708	C-18	Q602	E-5
D709	C-18	Q701	E-19
D710	C-18	Q703	D-18
D711	B-19	Q751	E-19
D712	B-19	Q801	J-20
D713	C-19	Q802	J-21
D714	C-19	Q851	J-20
D715	C-19	Q852	J-21
D716	D-20	Q851	J-21
D801	I-23	Q901	J-22
D802	H-24	Q902	J-22
D803	I-21	Q903	H-22
D901	H-20		
D902	H-22		
D903	I-21	D904	F-26

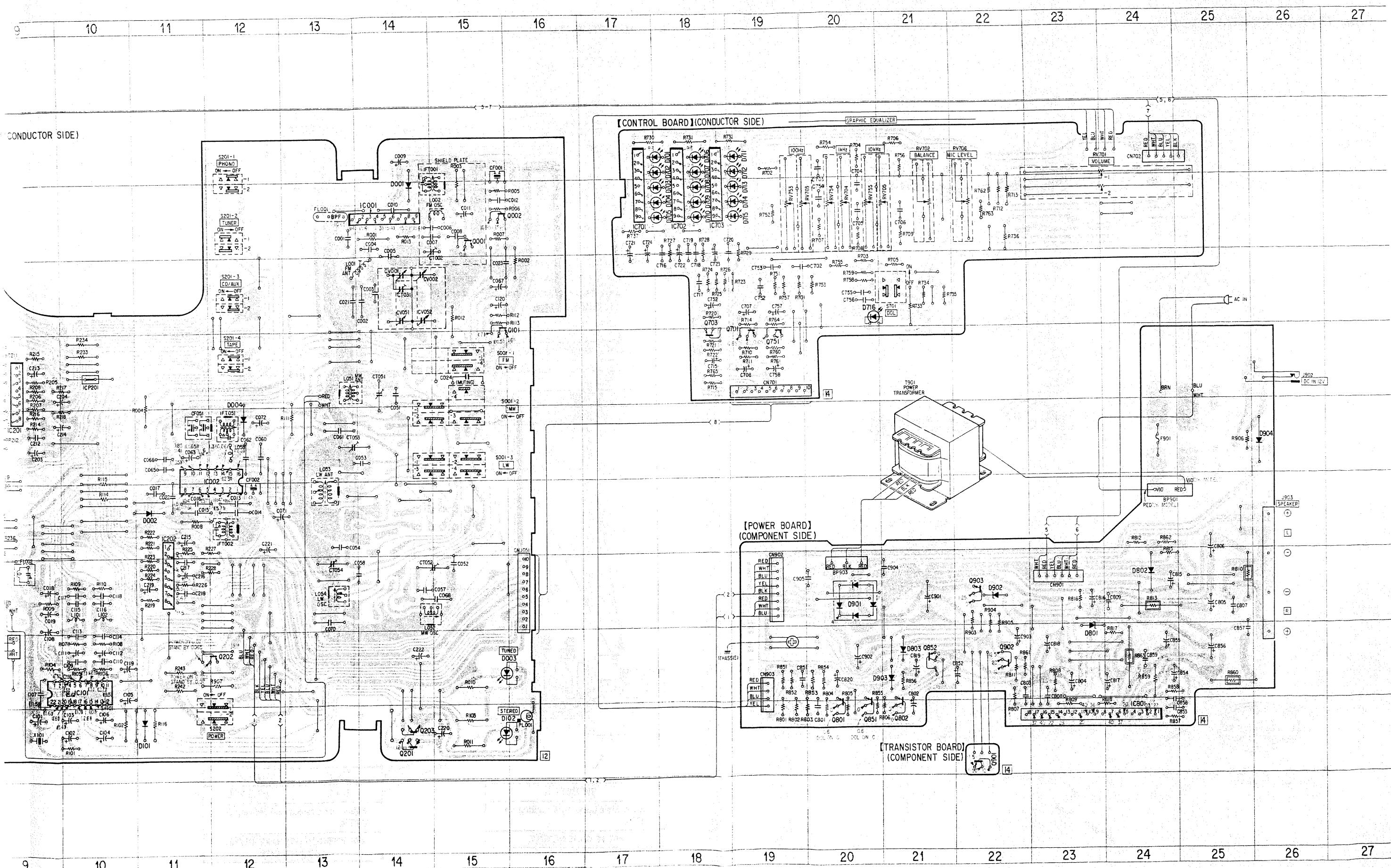
Circuit Board Layout



Note:

- — : parts extracted from the component side.
- ■ : part mounted on the conductor side.
- [] : indicates side identified with part number.

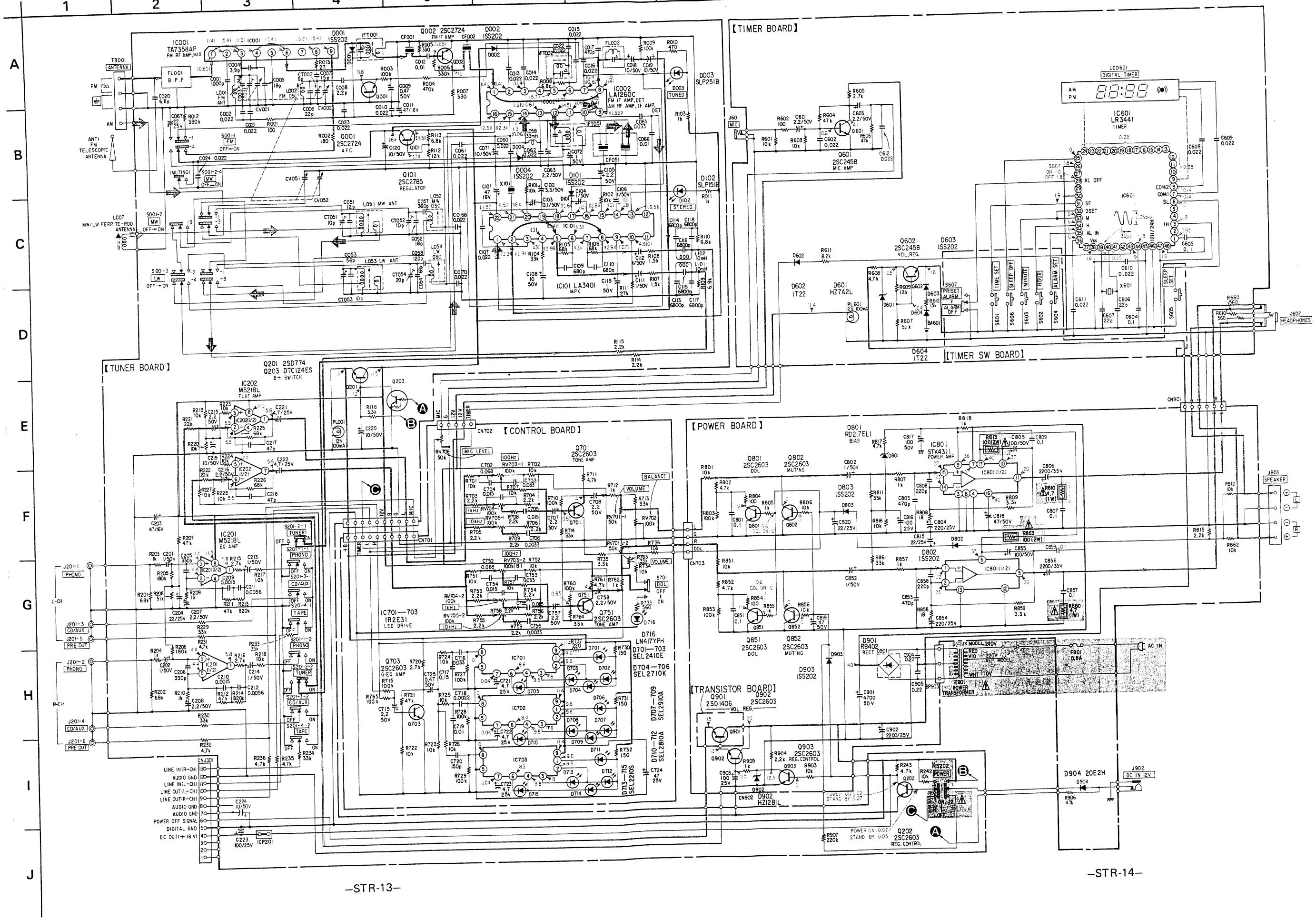




**FH-55W
STR-55D**

**FH-55W
STR-55D**

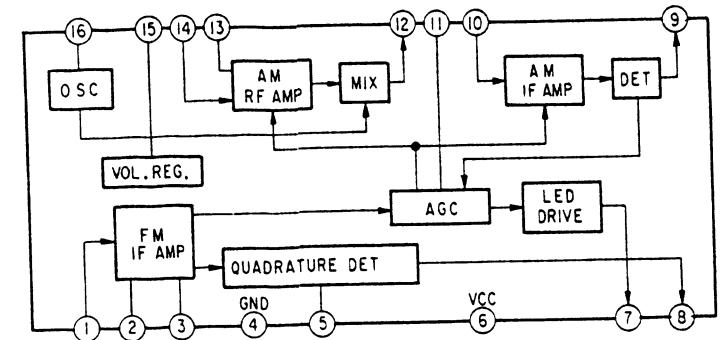
6. SCHEMATIC DIAGRAM



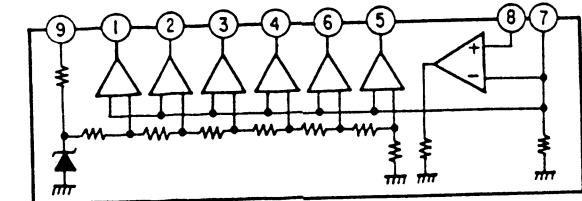
15 | 16 | 17 | 18 | 19

IC BLOCK DIAGRAMS

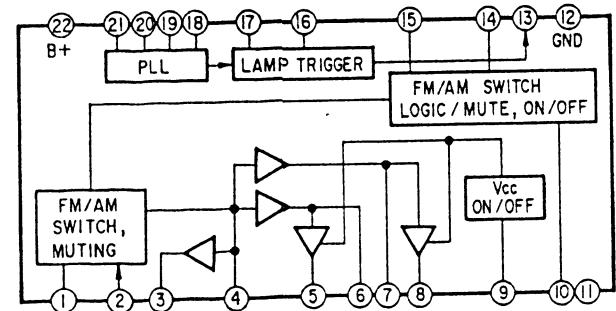
LA1260C



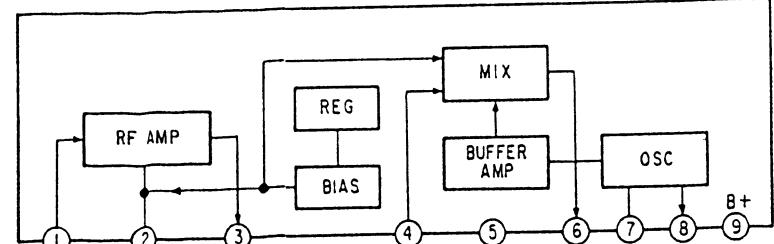
IR2E31



LA3401



TA7358P



A

Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$
- 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{ W}$ or less unless otherwise specified.
- Δ : internal component.
- \square : nonflammable resistor.
- Switch with sliding contact indicated by hatched lines shows shorting type.



B

- : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (50 $k\Omega/\text{V}$).
- no mark: AM
() : FM
(()) : common (FM/AM)
- Voltage variations may be noted due to normal production tolerances.
- : main signal path (FM)
- : signal path (MW)
- Switch

Ref.No.	Switch	Position
S001	BAND SELECT	FM
S201	FUNCTION	TUNER
S202	POWER	OFF
S601	TIME SET	OFF
S602	HOUR	OFF
S603	MINUTE	OFF
S604	ALARM SET	OFF
S605	SLEEP SET	OFF
S606	SLEEP OFF	OFF
S607	REPEAT ALARM	OFF
S701	DOL	OFF

Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

C

D

E

F

G

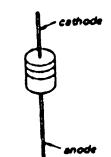
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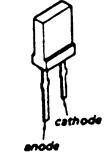
-STR-15-

SEMICONDUCTOR LEAD LAYOUT

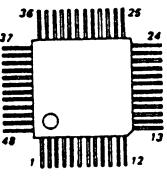
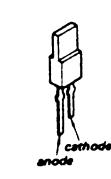
1SS202-1



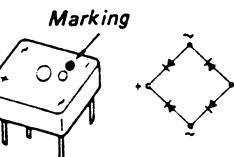
LN417YPH



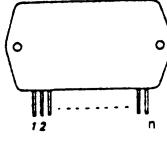
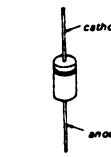
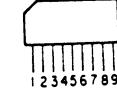
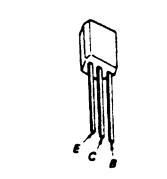
LR3441

SLP251B-60
SLP151B-60

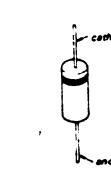
RB402



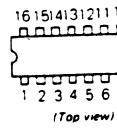
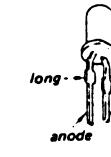
STK4311

HZ7A2L
RD2.7EL1
HZ12B1L
2OE2HTA7358AP
IR2E312SC2724C
DTC124ES

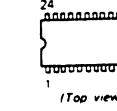
1T22A



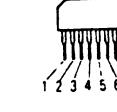
LA1260C

SEL2410E-C
SEL2910A-C
SEL2810A-C
SEL2210S-C

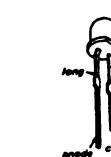
LA3401



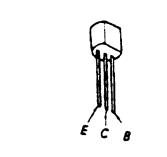
M5218L



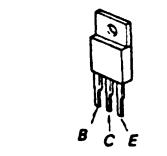
SEL2710K



2SD789



2SD1266Q



**FH-55W
STR-55D**

7. EXPLODED VIEWS AND PARTS LIST

NOTE:

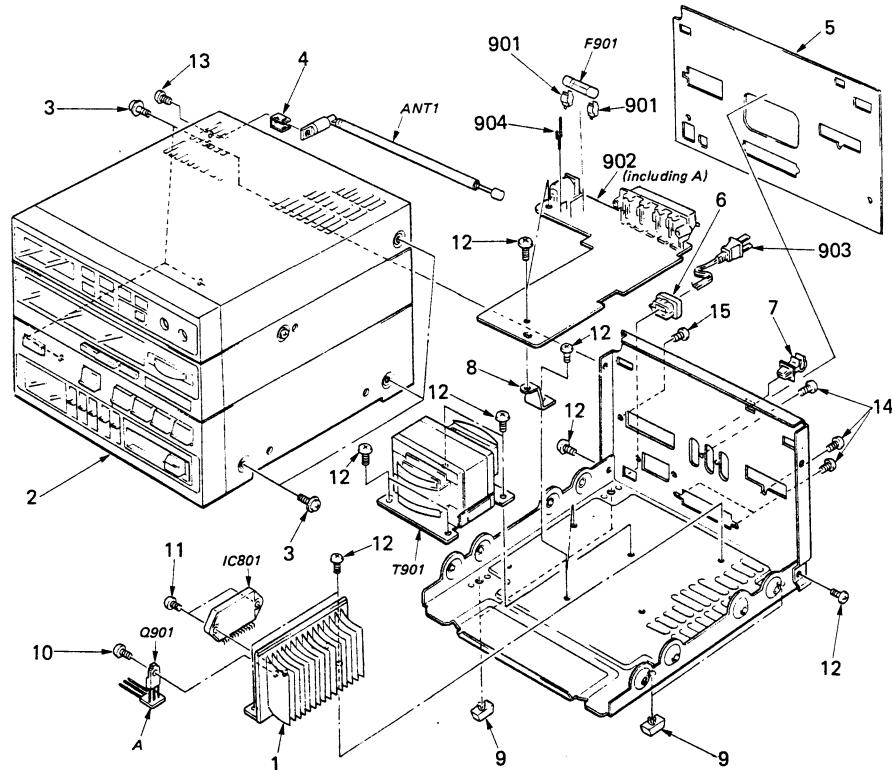
The mechanical parts with no reference number in the exploded views are not supplied.

Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

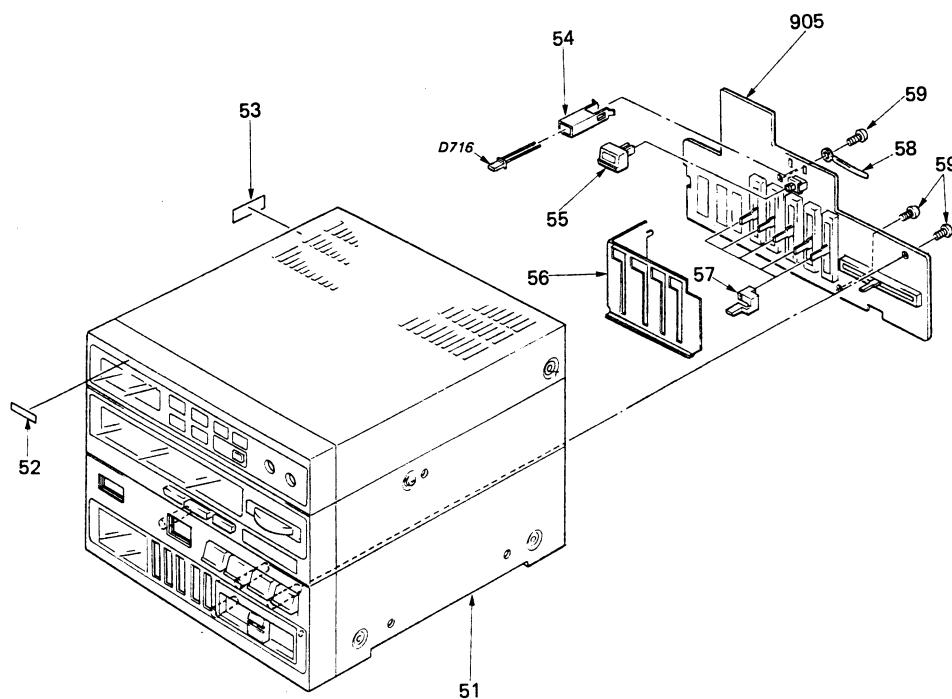
The construction parts of an assembled part are indicated with a collation number in the remark column.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

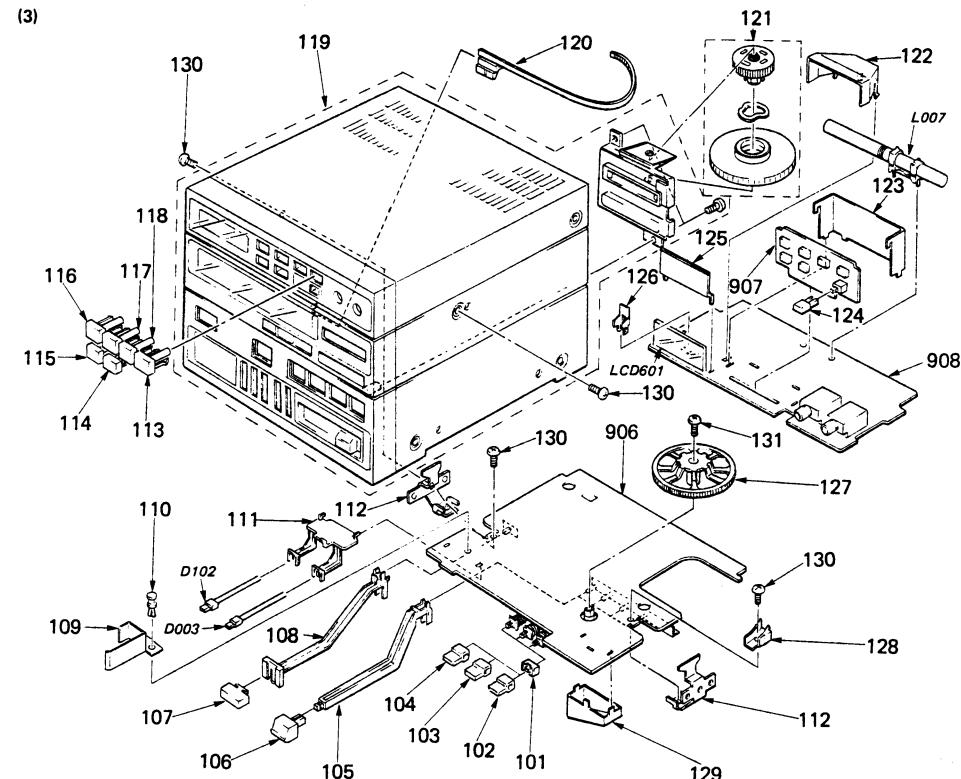
(1)



(2)



(3)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	X-4915-609-1	PANEL ASSY, FRONT		57	4-915-319-21	KNOB, GRAPHIC EQUALIZER	
52	3-701-690-00	(UK)....LABEL (MADE IN JAPAN)		58	*3-703-150-11	CLAMP	
53	3-703-079-21	(UK)....LABEL, CAUTION (BACK)		59	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
54	*4-915-626-01	HOLDER, LED		905	*1-618-852-11	PC BOARD, CONTROL	
55	4-915-604-11	KNOB (B), FUNCTION (DOL)		D716	8-719-403-97	DIODE LN417YPH	
56	*4-915-606-01	PLATE (GE), BLIND					

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	4-864-370-00	RING		119	X-4915-609-1	PANEL ASSY, FRONT		123	*4-915-638-01	RETAINER, PC BOARD	
102	4-915-601-01	BUTTON, BAND SELECT (FM)		120	*4-915-640-01	RACK, POINTER		124	4-915-610-01	BUTTON, SQUARE	
103	4-915-601-11	BUTTON, BAND SELECT (MW)		121	A-4490-211-A	KNOB ASSY, TUNING		125	4-884-848-00	ILLUMINATOR (ST)	
104	4-915-601-41	BUTTON, BAND SELECT (LW)		122	*4-915-627-01	HOUSE, LAMP		126	*4-904-507-01	BLIND, LAMP	
105	*4-915-621-01	ROD, FUNCTION		127	4-915-617-01	GEAR, DRUM		128	*4-915-644-01	RAIL, GUIDE	
106	4-915-604-01	KNOB (B), FUNCTION		129	*4-915-644-00	PLATE (C), SHIELD		129	*4-868-450-00	PLATE (C), SHIELD	
107	4-910-056-41	KNOB, POWER		130	7-685-751-09	SCREW +BVTT 3X6 (S)		130	7-685-751-09	SCREW +BVTT 3X6 (S)	
108	*4-915-620-01	JOINT, POWER		131	7-621-773-95	SCREW +B 2.6X6		131	7-621-773-95	SCREW +B 2.6X6	
109	*4-915-645-01	PLATE, LIGHT INTERCEPTION		132				132			
110	4-812-134-11	RIVET, NYLON, 3.5		133				133			
111	*4-915-639-01	HOLDER, LED		134				134			
112	*4-915-635-01	HOLDER, PC BOARD		135				135			
113	4-915-614-31	BUTTON (B), TIMER SQUARE (ALARM SET)		136				136			
114	4-915-614-51	BUTTON (B), TIMER SQUARE (SLEEP OFF)		137				137			
115	4-915-614-41	BUTTON (B), TIMER SQUARE (SLEEP SET)		138				138			
116	4-915-614-01	BUTTON (B), TIMER SQUARE (TIME SET)		139				139			
117	4-915-614-11	BUTTON (B), TIMER SQUARE (HOUR)		140				140			
118	4-915-614-21	BUTTON (B), TIMER SQUARE (MINUTE)		141				141			
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8. ELECTRICAL PARTS LIST

NOTE:
 - Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
 - If there are two or more same circuitry in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
 MF:μF, PF:μF.

RESISTORS:

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U = u, for example:
 UA...: μA..., UPA...: μPA..., UPC...: μPC,

UPD...: μPD...

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

ELECTRICAL PARTS

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
901  -533-162-00	HOLDER, FUSE		C060 1-161-494-00	CERAMIC	0.022MF 30% 25V
902 *A-4388-526-A	MOUNTED PCB, POWER		C061 1-161-494-00	CERAMIC	0.022MF 30% 25V
903  -534-817-XX (AEP)....CORD, POWER, EURO PLUG			C062 1-161-494-00	CERAMIC	0.022MF 30% 25V
 -555-001-00 (UK)....CORD, POWER			C063 1-123-381-00	ELECT	2.2MF 20% 50V
904 1-535-416-00	TERMINAL		C065 1-130-489-00	MYLAR	0.033MF 5% 50V
905 *1-618-852-11	PC BOARD, CONTROL		C066 1-162-306-31	CERAMIC	0.01MF 20% 16V
906 *A-4351-506-A	MOUNTED PCB, TUNER		C067 1-123-330-00	ELECT	22MF 20% 25V
907 *1-618-854-11	PC BOARD, TIMER SW		C068 1-161-494-00	CERAMIC	0.022MF 30% 25V
908 *1-618-851-11	PC BOARD, TIMER		C070 1-161-494-00	CERAMIC	0.022MF 30% 25V
ANT1 1-501-270-00	ANTENNA, TELESCOPIC (FM)		C071 1-123-356-00	ELECT	10MF 20% 50V
BAG01 1-528-188-11	BATTERY, LITHIUM		C072 1-123-380-00	ELECT	1MF 20% 50V
			C073 1-123-332-00	ELECT	47MF 20% 16V
C102 1-123-382-00	ELECT	3.3MF 20% 50V	C074 1-136-155-00	FILM	0.015MF 5% 50V
C103 1-123-607-00	ELECT	0.1MF 20% 50V	C075 1-136-155-00	FILM	0.015MF 5% 50V
C104 1-123-380-00	ELECT	1MF 20% 50V	C076 1-162-303-31	CERAMIC	0.0033MF 20% 16V
			C077 1-123-612-00	ELECT	2.2MF 20% 50V
C105 1-123-381-00	ELECT	2.2MF 20% 50V	C078 1-123-612-00	ELECT	2.2MF 20% 50V
C106 1-123-380-00	ELECT	1MF 20% 50V	C079 1-123-612-00	ELECT	2.2MF 20% 50V
C107 1-161-494-00	CERAMIC	0.022MF 30% 25V	C108 1-123-356-00	ELECT	10MF 20% 50V
C001 1-162-294-31	CERAMIC	0.001MF 10% 50V	C109 1-162-292-31	CERAMIC	680PF 10% 50V
C002 1-161-494-00	CERAMIC	0.022MF 30% 25V	C110 1-162-292-31	CERAMIC	680PF 10% 50V
C003 1-162-208-31	CERAMIC	24PF 5% 50V	C111 1-123-380-00	ELECT	1MF 20% 50V
C004 1-162-194-31	CERAMIC	3.9PF 10% 50V	C112 1-123-380-00	ELECT	1MF 20% 50V
C005 1-162-205-31	CERAMIC	18PF 5% 50V	C113 1-162-305-31	CERAMIC	0.0068MF 20% 16V
C006 1-102-892-00	CERAMIC	22PF 5% 50V	C114 1-162-305-31	CERAMIC	0.0068MF 20% 16V
C007 1-162-203-31	CERAMIC	15PF 5% 50V	C115 1-162-305-31	CERAMIC	0.0068MF 20% 16V
C008 1-162-191-31	CERAMIC	2.2PF 10% 50V	C116 1-162-305-31	CERAMIC	0.0068MF 20% 16V
C009 1-123-379-00	ELECT	0.47MF 20% 50V	C117 1-162-305-31	CERAMIC	0.0068MF 20% 16V
C010 1-161-494-00	CERAMIC	0.022MF 30% 25V	C118 1-162-305-31	CERAMIC	0.0068MF 20% 16V
C011 1-123-332-00	ELECT	47MF 20% 16V	C119 1-123-380-00	ELECT	0.0068MF 20% 16V
C012 1-162-306-31	CERAMIC	0.01MF 20% 16V	C120 1-123-356-00	ELECT	10MF 20% 50V
C013 1-161-494-00	CERAMIC	0.022MF 30% 25V	C121 1-123-332-00	ELECT	47MF 20% 16V
C014 1-161-494-00	CERAMIC	0.022MF 30% 25V	C122 1-123-330-00	ELECT	22MF 20% 25V
C015 1-161-494-00	CERAMIC	0.022MF 30% 25V	C123 1-123-380-00	ELECT	1MF 20% 50V
C016 1-161-494-00	CERAMIC	0.022MF 30% 25V	C124 1-123-380-00	ELECT	1MF 20% 50V
C017 1-162-290-31	CERAMIC	470PF 10% 50V	C125 1-123-380-00	ELECT	1MF 20% 50V
C018 1-123-356-00	ELECT	10MF 20% 50V	C126 1-123-380-00	ELECT	1MF 20% 50V
C019 1-123-356-00	ELECT	10MF 20% 50V	C127 1-123-332-00	ELECT	47MF 20% 16V
C020 1-162-197-31	CERAMIC	6.8PF 10% 50V	C128 1-123-330-00	ELECT	22MF 20% 25V
C021 1-161-494-00	CERAMIC	0.022MF 30% 25V	C129 1-162-288-31	CERAMIC	330PF 10% 50V
C022 1-161-494-00	CERAMIC	0.022MF 30% 25V	C130 1-162-288-31	CERAMIC	330PF 10% 50V
C023 1-161-494-00	CERAMIC	0.022MF 30% 25V	C131 1-123-381-00	ELECT	2.2MF 20% 50V
C024 1-161-494-00	CERAMIC	0.022MF 30% 25V	C132 1-123-381-00	ELECT	2.2MF 20% 50V
C025 1-162-201-31	CERAMIC	12PF 5% 50V	C133 1-162-301-31	CERAMIC	0.0015MF 20% 16V
C026 1-102-295-00	CERAMIC	18PF 5% 50V	C134 1-162-301-31	CERAMIC	0.0015MF 20% 16V
C027 1-162-217-31	CERAMIC	56PF 5% 50V	C135 1-102-126-00	CERAMIC	0.0056MF 10% 50V
C028 1-102-860-00	CERAMIC	68PF 5% 50V	C136 1-102-126-00	CERAMIC	0.0056MF 10% 50V
C029 1-104-066-00	POLYSTYRENE	360PF 5% 50V	C137 1-123-380-00	ELECT	1MF 20% 50V
C030 1-104-055-00	POLYSTYRENE	120PF 5% 50V	C138 1-123-380-00	ELECT	1MF 20% 50V
C031 1-123-381-00	ELECT	1MF 20% 50V	C139 1-124-618-11	ELECT	2200MF 20% 35V
C032 1-123-380-00	ELECT	1MF 20% 50V	C140 1-136-165-00	FILM	0.1MF 5% 50V
C033 1-123-380-00	ELECT	1MF 20% 50V	C141 1-162-286-31	CERAMIC	220PF 10% 50V
C034 1-123-380-00	ELECT	1MF 20% 50V	C142 1-124-122-11	ELECT	100MF 20% 50V
C035 1-123-380-00	ELECT	1MF 20% 50V	C143 1-124-122-11	ELECT	22MF 20% 50V
C036 1-123-380-00	ELECT	1MF 20% 50V	C144 1-124-122-11	ELECT	47MF 20% 50V
C037 1-123-380-00	ELECT	1MF 20% 50V	C145 1-124-122-11	ELECT	47MF 20% 50V
C038 1-123-380-00	ELECT	1MF 20% 50V	C146 1-124-122-11	ELECT	100MF 20% 50V
C039 1-123-380-00	ELECT	1MF 20% 50V	C147 1-124-122-11	ELECT	22MF 20% 50V
C040 1-123-380-00	ELECT	1MF 20% 50V	C148 1-124-122-11	ELECT	47MF 20% 50V
C041 1-123-380-00	ELECT	1MF 20% 50V	C149 1-124-122-11	ELECT	100MF 20% 50V
C042 1-123-380-00	ELECT	1MF 20% 50V	C150 1-124-122-11	ELECT	22MF 20% 50V
C043 1-123-380-00	ELECT	1MF 20% 50V	C151 1-124-122-11	ELECT	47MF 20% 50V
C044 1-123-380-00	ELECT	1MF 20% 50V	C152 1-124-122-11	ELECT	100MF 20% 50V
C045 1-123-380-00	ELECT	1MF 20% 50V	C153 1-124-122-11	ELECT	22MF 20% 50V
C046 1-123-380-00	ELECT	1MF 20% 50V	C154 1-124-122-11	ELECT	47MF 20% 50V
C047 1-123-380-00	ELECT	1MF 20% 50V	C155 1-124-122-11	ELECT	100MF 20% 50V
C048 1-123-380-00	ELECT	1MF 20% 50V	C156 1-124-122-11	ELECT	22MF 20% 50V
C049 1-123-380-00	ELECT	1MF 20% 50V	C157 1-124-122-11	ELECT	47MF 20% 50V
C050 1-123-380-00	ELECT	1MF 20% 50V	C158 1-124-122-11	ELECT	100MF 20% 50V
C051 1-123-380-00	ELECT	1MF 20% 50V	C159 1-124-122-11	ELECT	22MF 20% 50V
C052 1-123-380-00	ELECT	1MF 20% 50V	C160 1-124-122-11	ELECT	47MF 20% 50V
C053 1-123-380-00	ELECT	1MF 20% 50V	C161 1-124-122-11	ELECT	100MF 20% 50V
C054 1-123-380-00	ELECT	1MF 20% 50V	C162 1-124-122-11	ELECT	22MF 20% 50V
C055 1-123-380-00	ELECT	1MF 20% 50V	C163 1-124-122-11	ELECT	47MF 20% 50V
C056 1-123-380-00	ELECT	1MF 20% 50V	C164 1-124-122-11	ELECT	100MF 20% 50V
C057 1-123-380-00	ELECT	1MF 20% 50V	C165 1-124-122-11	ELECT	22MF 20% 50V
C058 1-123-380-00	ELECT	1MF 20% 50V	C166 1-124-122-11	ELECT	47MF 20% 50V
C059 1-123-380-00	ELECT	1MF 20% 50V	C167 1-124-122-11	ELECT	100MF 20% 50V
C060 1-123-380-00	ELECT	1MF 20% 50V	C168 1-124-122-11	ELECT	22MF 20% 50V
C061 1-123-380-00	ELECT	1MF 20% 50V	C169 1-124-122-11	ELECT	47MF 20% 50V
C062 1-123-380-00	ELECT	1MF 20% 50V	C170 1-124-122-11	ELECT	100MF 20% 50V
C063 1-123-380-00	ELECT	1MF 20% 50V	C171 1-124-122-11	ELECT	22MF 20% 50V
C064 1-123-380-00	ELECT	1MF 20% 50V	C172 1-124-122-11	ELECT	47MF 20% 50V
C065 1-123-380-00	ELECT	1MF 20% 50V	C173 1-124-122-11	ELECT	100MF 20% 50V
C066 1-123-380-00	ELECT	1MF 20% 50V	C174 1-124-122-11	ELECT	22MF 20% 50V
C067 1-123-380-00	ELECT	1MF 20% 50V	C175 1-124-122-11	ELECT	47MF 20% 50V
C068 1-123-380-00	ELECT	1MF 20% 50V	C176 1-124-122-11	ELECT	100MF 20% 50V
C069 1-123-380-00	ELECT	1MF 20% 50V	C177 1-124-122-11	ELECT	22MF 20% 50V
C070 1-123-380-00	ELECT	1MF 20% 50V	C178 1-124-122-11	ELECT	47MF 20% 50V
C071 1-123-380-00	ELECT	1MF 20% 50V	C179 1-124-122-11	ELECT	100MF 20% 50V
C072 1-123-380-00	ELECT	1MF 20% 50V	C180 1-123-330-31	CERAMIC	0.0022MF 30% 16V
C073 1-123-380-00	ELECT	1MF 20% 50V	C181 1-123-330-31	CERAMIC	0.0033MF 20% 16V
C074 1-123-380-00	ELECT	1MF 20% 50V	C182 1-123-380-00	ELECT	1MF 20% 50V
C075 1-123-380-00	ELECT	1MF 20% 50V	C183 1-123-332-00	ELECT	47MF 20% 50V
C076 1-123-380-00	ELECT	1MF 20% 50V	C184 1-123-330-00	ELECT	22MF 20% 25V
C077 1-123-380-00	ELECT	1MF 20% 50V	C185 1-123-330-00	ELECT	47MF 20% 50V
C078 1-123-380-00	ELECT	1MF 20% 50V	C186 1-123-330-00	ELECT	100MF 20% 50V
C079 1-123-380-00	ELECT	1MF 20% 50V	C187 1-123-330-00	ELECT	22MF 20% 50V
C080 1-123-380-00	ELECT	1MF 20% 50V	C188 1-123-330-00	ELECT	47MF 20% 50V
C081 1-123-380-00	ELECT	1MF 20% 50V	C189 1-123-330-00	ELECT	100MF 20% 50V
C082 1-123-380-00	ELECT	1MF 20% 50V	C190 1-123-330-00	ELECT	22MF 20% 50V
C083 1-123-380-00	ELECT	1MF 20% 50V	C191 1-123-330-00	ELECT	47MF 20% 50V
C084 1-123-380-00	ELECT	1MF 20% 50V	C192 1-123-330-00	ELECT	100MF 20% 50V
C085 1-123-380-00	ELECT	1MF 20% 50V	C193 1-123-330-00	ELECT	22MF 20% 50V
C086 1-123-380-00	ELECT	1MF 20% 50V	C194 1-123-330-00	ELECT	47MF 20% 50V
C087 1-123-380-00	ELECT	1MF 20% 50V	C195 1-123-330-00	ELECT	100MF 20% 50V
C088 1-123-380-00	ELECT	1MF 20% 50V	C196 1-123-330-00	ELECT	22MF 20% 50V
C089 1-123-380-00	ELECT	1MF 20% 50V	C197 1-123-330-00	ELECT	47MF 20% 50V
C090 1-123-380-00	ELECT	1MF 20% 50V	C198 1-123-330-00	ELECT	100MF 20% 50V
C091 1-123-380-00	ELECT	1MF 20% 50V	C199 1-123-330-00	ELECT	22MF 20% 50V
C092 1-123-380-00	ELECT	1MF 20% 50V	C200 1-123-330-00	ELECT	47MF 20% 50V
C093 1-123-380-00	ELECT	1MF 20% 50V	C201 1		

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D703	8-719-301-43	DIODE SEL2410E-C
D704	8-719-300-95	DIODE SEL2710K
D705	8-719-300-95	DIODE SEL2710K

Ref.No.	Part No.	Description
D706	8-719-300-95	DIODE SEL2710K
D707	8-719-301-60	DIODE SEL2910A-C
D708	8-719-301-60	DIODE SEL2910A-C

Ref.No.	Part No.	Description
D709	8-719-301-60	DIODE SEL2910A-C
D710	8-719-301-52	DIODE SEL2810A-C
D711	8-719-301-52	DIODE SEL2810A-C

Ref.No.	Part No.	Description
D712	8-719-301-52	DIODE SEL2810A-C
D713	8-719-301-38	DIODE SEL2210S-C
D714	8-719-301-38	DIODE SEL2210S-C

Ref.No.	Part No.	Description
D715	8-719-301-38	DIODE SEL2210S-C
D716	8-719-403-97	DIODE LN417YPH
D801	8-719-101-32	DIODE R02.7EL1

Ref.No.	Part No.	Description
D802	8-719-107-94	DIODE ISS202-1
D803	8-719-107-94	DIODE ISS202-1
D901	8-719-300-57	DIODE R8402

Ref.No.	Part No.	Description
D902	8-719-910-24	DIODE HZ12B1L
D903	8-719-107-94	DIODE ISS202-1
D904	8-719-200-62	DIODE 20E2H

Ref.No.	Part No.	Description
F901	Δ-1-532-215-00	FUSE, TIME-LAG

Ref.No.	Part No.	Description
FL001	1-235-082-00	FILTER, BAND PASS
FL002	1-235-046-00	ENCAPSULATED COMPONENT (B.E.F.)

Ref.No.	Part No.	Description
IC001	8-759-204-03	IC TA7358AP
IC002	8-759-801-37	IC LA1260C
IC101	8-759-801-80	IC LA3401

Ref.No.	Part No.	Description
IC201	8-759-600-02	IC M5218L
IC202	8-759-600-02	IC M5218L
IC601	8-759-925-46	IC LR3441

Ref.No.	Part No.	Description
IC701	8-759-913-80	IC IR2E31
IC702	8-759-913-80	IC IR2E31
IC703	8-759-913-80	IC IR2E31
IC801	8-749-943-11	IC STK4311

Ref.No.	Part No.	Description
ICP201	1-532-841-21	LINK, IC

Ref.No.	Part No.	Description
IFT001*1-404-363-00	TRANSFORMER, IF	
IFT002 1-404-677-11	COIL, DISCRIMINATOR	
IFT051 1-404-535-11	COIL (WITH IFT)	

Ref.No.	Part No.	Description
J201	1-507-911-31	JACK, PIN 6P

Ref.No.	Part No.	Description
J601	1-563-285-00	JACK (MIC)

Ref.No.	Part No.	Description
J602	1-507-878-00	JACK, LARGE TYPE (HEADPHONES)

Ref.No.	Part No.	Description
J902	1-507-563-21	JACK, DC (DC IN 12V)

Ref.No.	Part No.	Description
J903	1-536-705-00	TERMINAL BOARD (SP)

Ref.No.	Part No.	Description
L001	*1-420-884-00	COIL, AIR CORE (FM ANT)

Ref.No.	Part No.	Description
L002	1-459-412-00	COIL (WITH CORE) (FM OSC)

Ref.No.	Part No.	Description
L007	1-402-214-11	ANTENNA, FERRITE-ROD (LW/MW)

Ref.No.	Part No.	Description
L051	1-402-212-11	COIL (MW ANT)

Ref.No.	Part No.	Description
L052	1-406-065-00	COIL (MW OSC)

Ref.No.	Part No.	Description
L053	1-402-038-00	COIL (LW ANT)

Ref.No.	Part No.	Description
L054	1-405-921-00	COIL, OSCILLATOR (LW OSC)

Ref.No.	Part No.	Description
L058	1-408-930-00	MICRO INDUCTOR 33MMH

Ref.No.	Part No.	Description
L101	1-408-924-00	MICRO INDUCTOR 10MMH

Ref.No.	Part No.	Description
L102	1-408-924-00	MICRO INDUCTOR 10MMH

ELECTRICAL PARTS

Ref.No.	Part No.	Description
LCD601	1-807-513-11	DISPLAY PANEL, LIQUID CRYSTAL

Ref.No.	Part No.	Description
PL001	1-518-511-21	LAMP, PILOT

Ref.No.	Part No.	Description
Q001	8-729-672-42	TRANSISTOR 2SC2724C

Ref.No.	Part No.	Description
Q002	8-729-672-42	TRANSISTOR 2SC2724C

Ref.No.	Part No.	Description
Q101	8-729-178-54	TRANSISTOR 2SC2785

Ref.No.	Part No.	Description
Q201	8-729-378-91	TRANSISTOR 2SD789

Ref.No.	Part No.	Description
Q202	8-729-178-54	TRANSISTOR 2SC2785

Ref.No.	Part No.	Description
Q203	8-729-900-34	TRANSISTOR DTC124ES

Ref.No.	Part No.	Description
Q601	8-729-178-54	TRANSISTOR 2SC2785

Ref.No.	Part No.	Description
Q602	8-729-178-54	TRANSISTOR 2SC2785

Ref.No.	Part No.	Description
Q701	8-729-178-54	TRANSISTOR 2SC2785

Ref.No.	Part No.	Description
Q801	8-729-178-54	TRANSISTOR 2SC2785

Ref.No.	Part No.	Description
Q802	8-729-178-54	TRANSISTOR 2SC2785

Ref.No.	Part No.	Description
Q851	8-729-178-54	TRANSISTOR 2SC2785

Ref.No.	Part No.	Description
Q852	8-729-178-54	TRANSISTOR 2SC2785

Ref.No.	Part No.	Description
R001	8-729-400-81	TRANSISTOR 2SD1266Q

Ref.No.	Part No.	Description
R0901	8-729-400-81	TRANSISTOR 2SD1266Q

Ref.No.	Part No.	Description
R0902	8-729-178-54	TRANSISTOR 2SC2785

Ref.No.	Part No.	Description
R0903	8-729-178-54	TRANSISTOR 2SC2785

Ref.No.	Part No.	Description
R007	1-247-819-00	CARBON

Ref.No.	Part No.	Description
R008	1-247-851-00	CARBON

Ref.No.	Part No.	Description
R009	1-249-441-11	CARBON

Ref.No.	Part No.	Description
R010	1-247-823-00	CARBON

Ref.No.	Part No.	Description
R011	1-249-417-11	CARBON

Ref.No.	Part No.	Description
R012	1-247-891-00	CARBON

Ref.No.	Part No.	Description
R013	1-247-793-00	CARBON

Ref.No.	Part No.	Description
R0101	1-249-429-11	CARBON

Ref.No.	Part No.	Description
R0102	1-249-429-11	CARBON

Ref.No.	Part No.	Description
R103	1-247-851-00	CARBON

Ref.No.	Part No.	Description
R110	1-247-851-00	CARBON

Ref.No.	Part No.	Description
R111	1-249-434-11	CARBON

Ref.No.	Part No.	Description
R112	1-247-857-00	CARBON

Ref.No.	Part No.	Description
R113	1-247-851-00	CARBON

Ref.No.	Part No.	Description
R114	1-247-839-00	CARBON

Ref.No.	Part No.	Description
R115	1-247-839-00	CARBON

Ref.No.	Part No.	Description
R116	1-249-423-11	CARBON

Ref.No.	Part No.	Description
R201	1-247-875-00	CARBON

Ref.No.	Part No.	Description
R202	1-247-875-00	CARBON

Ref.No.	Part No.	Description
R203	1-249-417-11	CARBON

Ref.No.	Part No.	Description
R204	1-249-417-11	CARBON

ELECTRICAL PARTS

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Ref.No.	Part No.	Description
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ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R815	1-247-839-00	CARBON	2.2K	5%	1/6W	
R816	1-249-429-11	CARBON	10K	5%	1/6W	
R817	1-249-425-11	CARBON	4.7K	5%	1/6W	
R818	1-249-417-11	CARBON	1K	5%	1/6W	
R851	1-249-429-11	CARBON	10K	5%	1/6W	
R852	1-249-425-11	CARBON	4.7K	5%	1/6W	
R853	1-249-441-11	CARBON	100K	5%	1/6W	
R854	1-249-405-11	CARBON	100	5%	1/6W	
R855	1-249-417-11	CARBON	1K	5%	1/6W	
R856	1-249-429-11	CARBON	10K	5%	1/6W	
R857	1-249-417-11	CARBON	1K	5%	1/6W	
R858	1-247-789-00	CARBON	18	5%	1/6W	
R859	1-249-423-11	CARBON	3.3K	5%	1/6W	
R860 Δ	1-212-368-11	METAL OXIDE	4.7	5%	1W	F
R861	1-249-435-11	CARBON	33K	5%	1/6W	
R862	1-249-429-11	CARBON	10K	5%	1/6W	
R863 Δ	1-206-640-00	METAL OXIDE	100	5%	2W	F
R903	1-249-429-11	CARBON	10K	5%	1/6W	
R904	1-247-839-00	CARBON	2.2K	5%	1/6W	
R905	1-249-417-11	CARBON	1K	5%	1/6W	
R906	1-249-437-11	CARBON	47K	5%	1/6W	
R907	1-247-887-00	CARBON	220K	5%	1/6W	
RV701	1-230-793-11	RES, VAR, SLIDE 50K/50K (VOLUME)				
RV702	1-230-360-11	RES, VAR, SLIDE 100K (BALANCE)				
RV703	1-237-226-11	RES, VAR, SLIDE 100K/100K (100Hz)				
RV704	1-237-226-11	RES, VAR, SLIDE 100K/100K (1kHz)				
RV705	1-237-226-11	RES, VAR, SLIDE 100K/100K (10kHz)				
RV706	1-230-361-11	RES, VAR, SLIDE 50K (MIC LEVEL)				
S001	1-570-649-11	SWITCH, PUSH (3 KEY)(BAND SELECT)				
S201	1-570-647-11	SWITCH, PUSH (4 KEY)(FUNCTION)				
S202 Δ	1-570-650-11	SWITCH, PUSH (1 KEY)(POWER)				
S601	1-554-303-21	SWITCH, KEY BOARD (TIME SET)				
S602	1-554-303-21	SWITCH, KEY BOARD (HOUR)				
S603	1-554-303-21	SWITCH, KEY BOARD (MINUTE)				
S604	1-554-303-21	SWITCH, KEY BOARD (ALARM SET)				
S605	1-554-303-21	SWITCH, KEY BOARD (SLEEP SET)				
S606	1-554-303-21	SWITCH, KEY BOARD (SLEEP OFF)				
S607	1-554-419-00	SWITCH, PUSH (1 KEY)(REPEAT/ARARM)				
S701	1-554-444-00	SWITCH, PUSH (1 KEY)(DOL)				
T901 Δ	1-448-519-11	TRANSFORMER, POWER				
T8001	1-536-708-00	TERMINAL BOARD, PUSH 4P (ANTENNA)				
X101	1-567-250-11	OSCILLATOR, CERAMIC				
X601	1-567-098-00	VIBRATOR, CRYSTAL				

STEREO CASSETTE DECK
(TC-55W/50WX)

Tape Transport Mechanism Type	TCM-CMAY A-1 (DECK A)
	TCM-CMAY B-7 (DECK B)

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

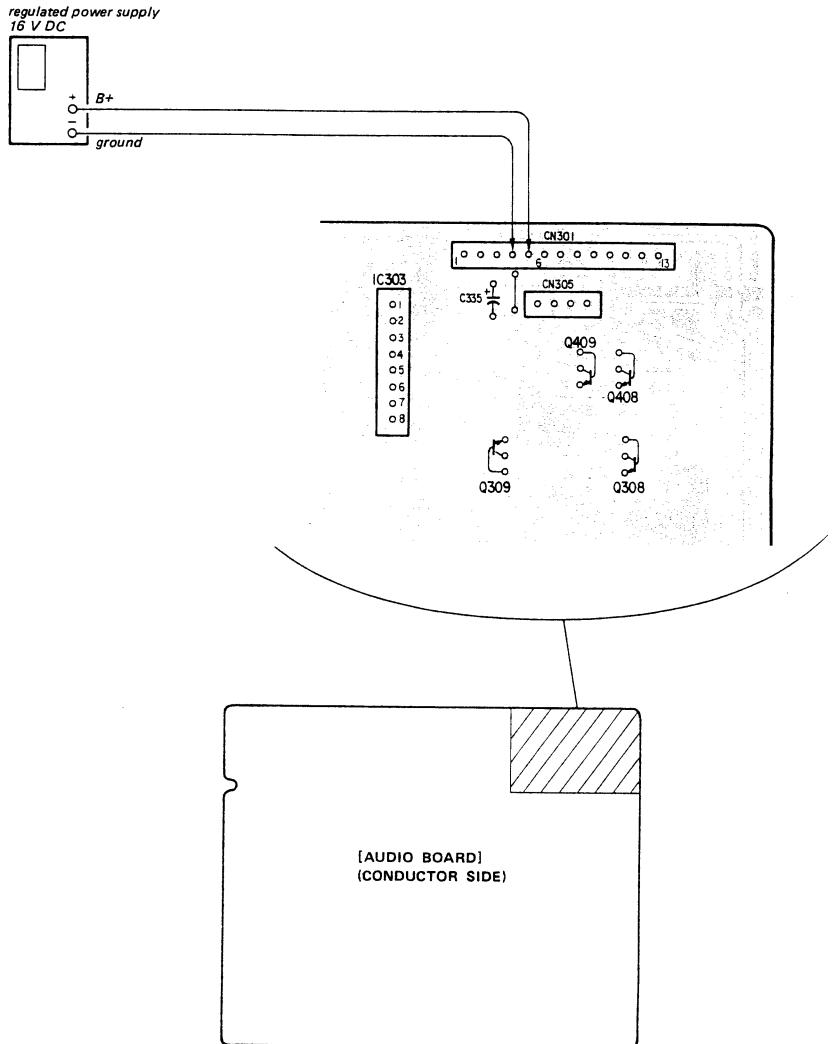
FH-55W/50WX
TC-55W/50WX

REPAIRING PRECAUTION

[To apply B+ voltage]

The power of this unit is fed from amplifier.

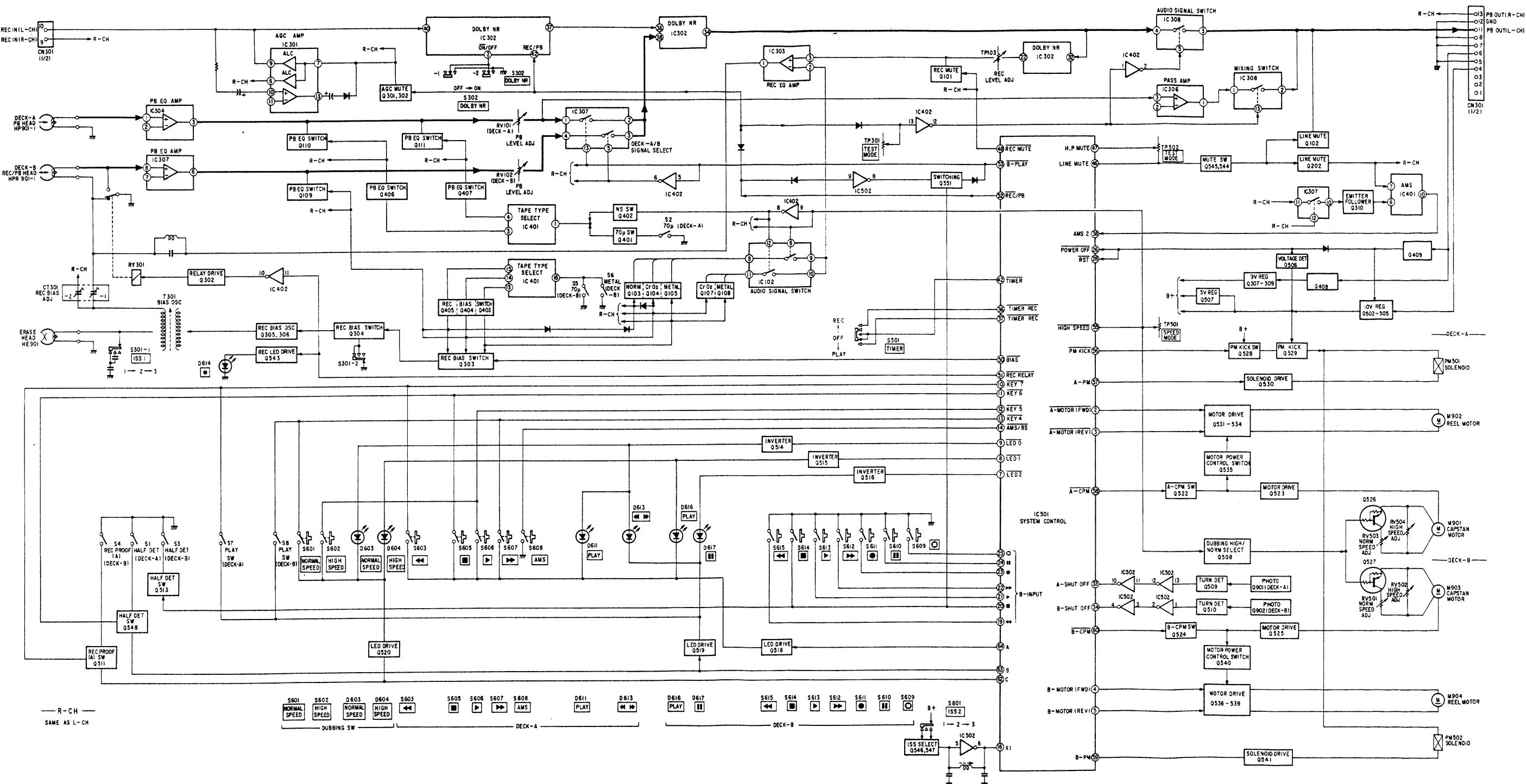
Because of this, connect the regulated power supply as illustrated below when this unit alone operates.



SECTION 1
BLOCK DIAGRAM

FH-55W/50WX
TC-55W/50WX

FH-55W/50WX
TC-55W/50WX



**SECTION 2
DISASSEMBLY**

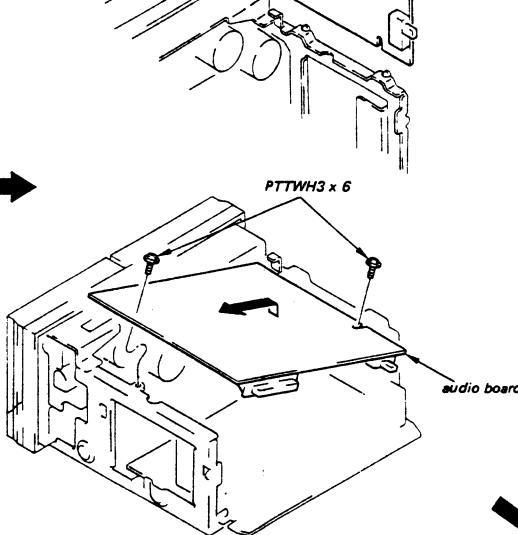
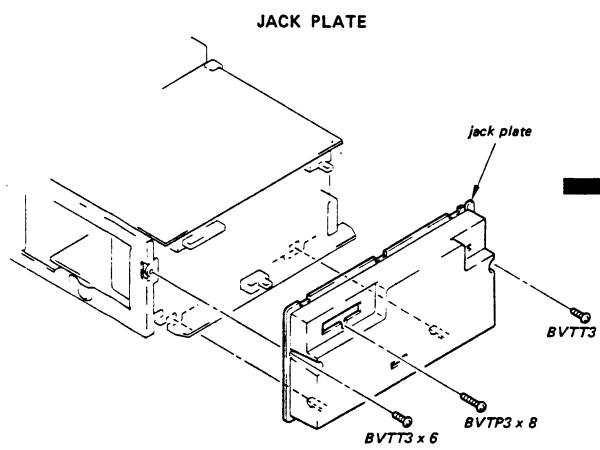
**FH-55W/50WX FH-55W/50WX
TC-55W/50WX TC-55W/50WX**

**FH-55W/50WX
TC-55W/50WX**

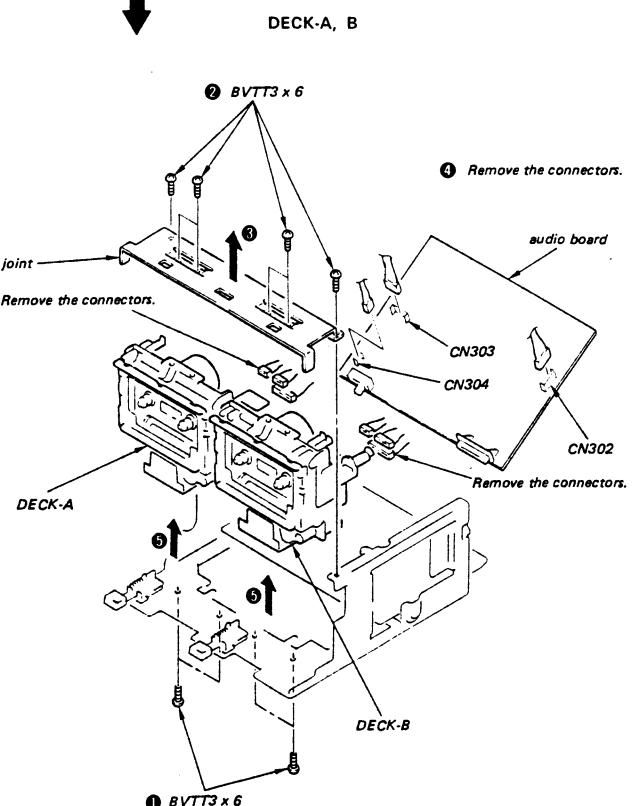
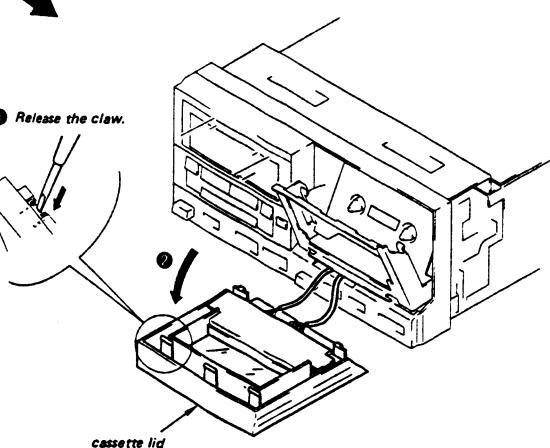
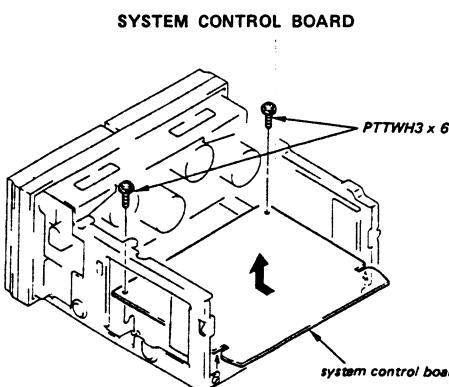
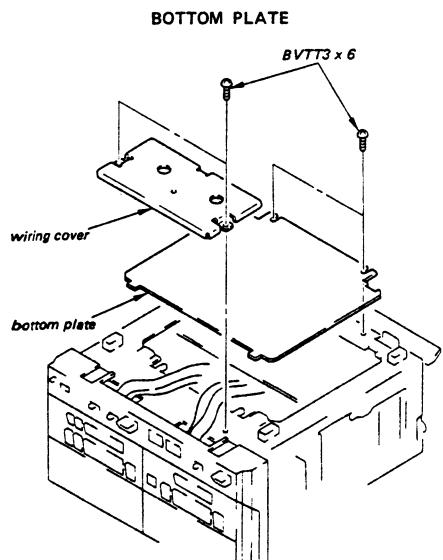
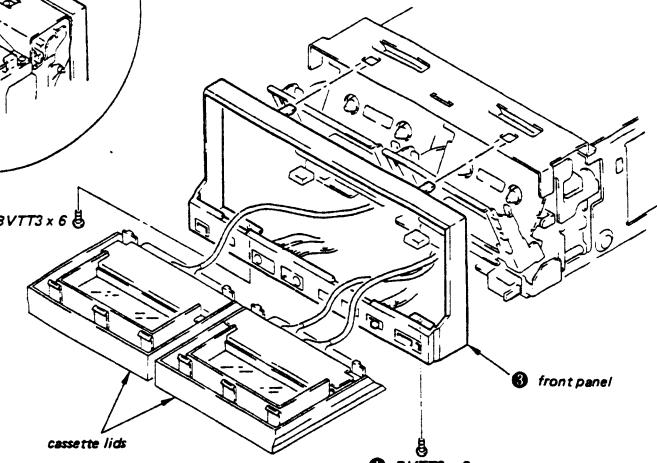
Note: Follow the disassembly procedure in the numerical order given.

CASE REMOVAL

Remove case by taking out four screws securing case.



FRONT PANEL

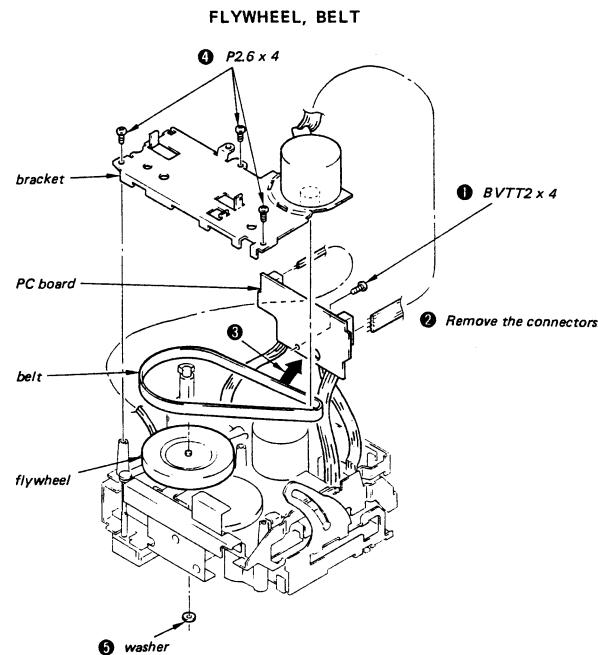


- TC-5 -

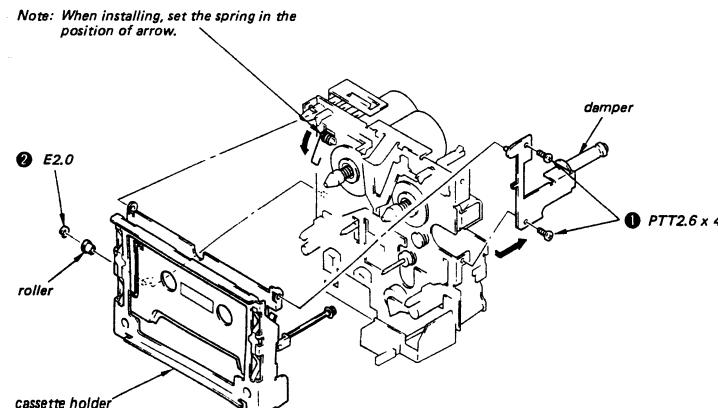
- TC-6 -

- TC-7 -

SECTION 3
ADJUSTMENTS



CASSETTE HOLDER



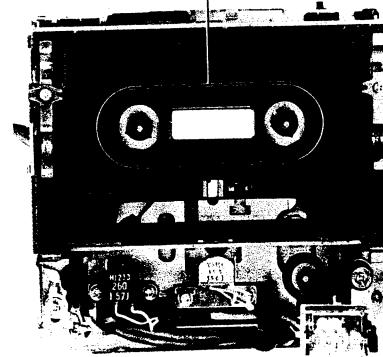
3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
record/playback/erase head rubber belts
capstan
pinch roller
2. Demagnetize the head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	30 - 70 g·cm (0.42 - 0.97 oz·inch)
Fast Forward and Rewind	CQ-201B	90 - 160 g·cm (1.25 - 2.22 oz·inch)
Forward BT	CQ102RB	2 - 6 g·cm (0.03 - 0.08 oz·inch)

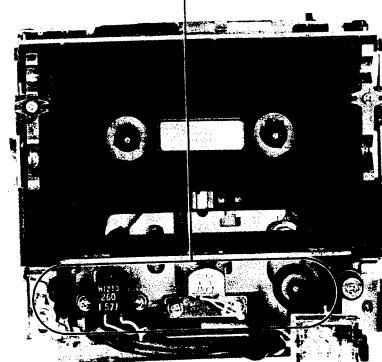
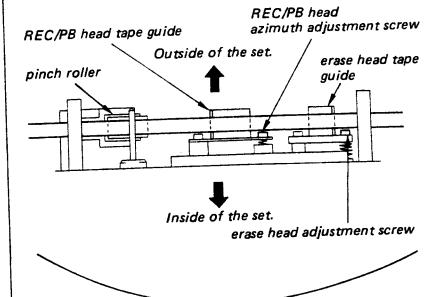


Tape Path Adjustment

Procedure:

1. Insert the mirror cassette (CQ-009 or CQ-012C).
2. Mode: FWD
Adjust FWD tape guide nuts and adjustment shims for no tape curl.
3. After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location:



3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual.
The adjustments should be performed for both L-CH and R-CH.

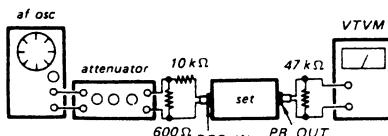
- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch: OFF
TIMER switch: OFF
ISS switch: 2

Standard Record:

Deliver the standard input signal level to the input jack and control the attenuator to obtain the standard output signal level.

- Record Mode -



Standard Input Level

	REC IN
source impedance	10 kΩ
input level	0.25 V (-10 dB)

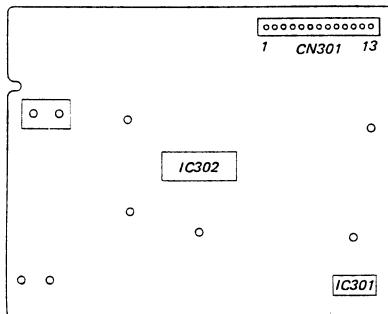
Standard Output Level

	PB OUT
load impedance	47 kΩ
output level	0.44 V (-5 dB)

Locations of REC IN and PB OUT

	CN301 terminal No.		
	L-CH	R-CH	GND
REC IN	10	9	12
PB OUT	11	13	12

[AUDIO BOARD] - Conductor Side -

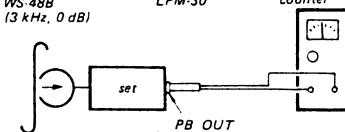


Tape Speed Adjustment

Procedure:

See the left for locations of REC IN and PB OUT.
Mode: forward-playback

test tape WS-48B (3 kHz, 0 dB)
speed checker LFM-30 or digital frequency counter (3 kHz)



- Put TP501 into TEST MODE. Adjust high speed pushing the dubbing (High) button from FWD MODE.

Specification: high speed

Speed checker	Digital frequency counter
-0.66 to +0.66%	6000 ±40 Hz

Frequency difference between DECK-A and DECK-B at the beginning of the tape should be within 1.5% (90 Hz).

Adjustment Location:

DECK-A side RV504
DECK-B side RV502

- Put TP501 into NORMAL MODE.

Specification: normal speed

Speed checker	Digital frequency counter
-0.66 to +0.66%	3000 ±20 Hz

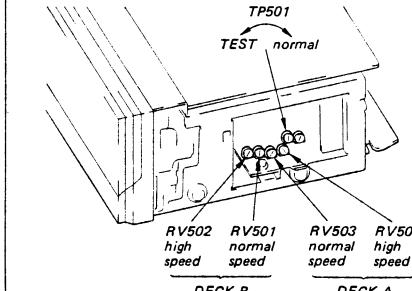
Frequency difference between DECK-A and DECK-B at the beginning of the tape should be within 1.5% (45 Hz).

Adjustment Location:

DECK-A side RV503
DECK-B side RV501

- If the specifications are not satisfied, repeat step 1 and 2.

Adjustment Location: system control board



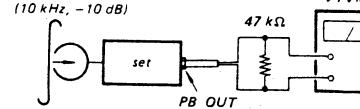
Record/playback Head Azimuth Adjustment

Procedure:

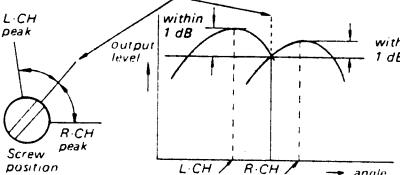
See page TC-10 for locations of REC IN and PB OUT.

- Mode: forward-playback

test tape P-4-A100 (10 kHz, -10 dB)

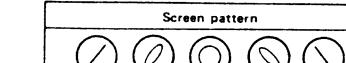
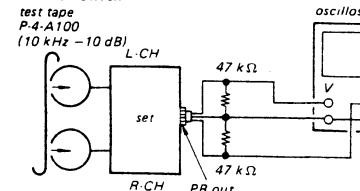


- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screws until both of output levels match together within 1 dB.



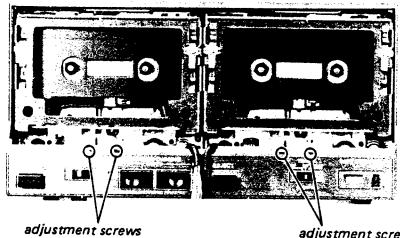
3. Phase Check

test tape P-4-A100 (10 kHz, -10 dB)



- After the adjustment, lock the screws with locking compound.

Adjustment Location:



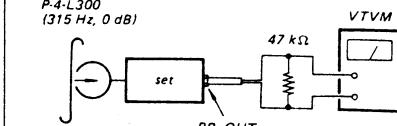
Playback Level Adjustment

Procedure:

See page TC-10 for locations of REC IN and PB OUT.

- Mode: playback

test tape P-4-L300 (315 Hz, 0 dB)



Adjust,
DECK-A side RV101 (L-CH), RV201 (R-CH)
DECK-B side RV102 (L-CH), RV202 (R-CH)
so that the specifications are satisfied.

Specification:

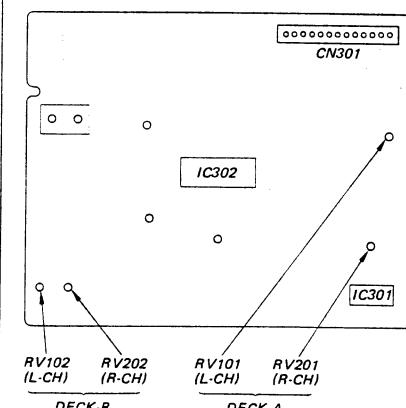
PB OUT level: 0.41 to 0.46 V (-5.5 to -4.5 dB)

Level difference between channels: less than 0.5 dB

Check that the PB OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location: audio board

[AUDIO BOARD] - Conductor Side -



FH-55W/50WX
TC-55W/50WX

Record Bias Adjustment

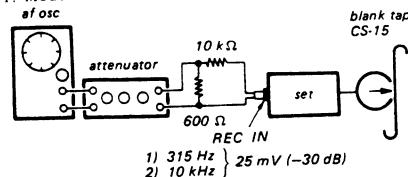
Setting:

- ATTENUATOR: standard record
(See page TC-10.)
- Put TP301, 502 into TEST MODE.

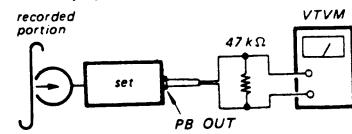
Procedure:

See page TC-16 for locations of REC IN and PB OUT.

1. Mode: record



2. Mode: playback



Confirm that the 10 kHz playback output is ± 0.5 dB relative to the 315 Hz output. If necessary, adjust CT301-1 (L-CH), CT301-2 (R-CH) and repeat the steps given above.

3. After adjustment, put TP301, 502 into NORMAL MODE.

Adjustment Location: audio board

Record Level Adjustment

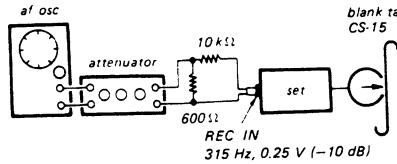
Setting:

- ATTENUATOR: standard record
(See page TC-10.)
- Put TP301, 502 into TEST MODE.

Procedure:

See page TC-16 for locations of REC IN and PB OUT.

1. Mode: record



2. Mode: playback



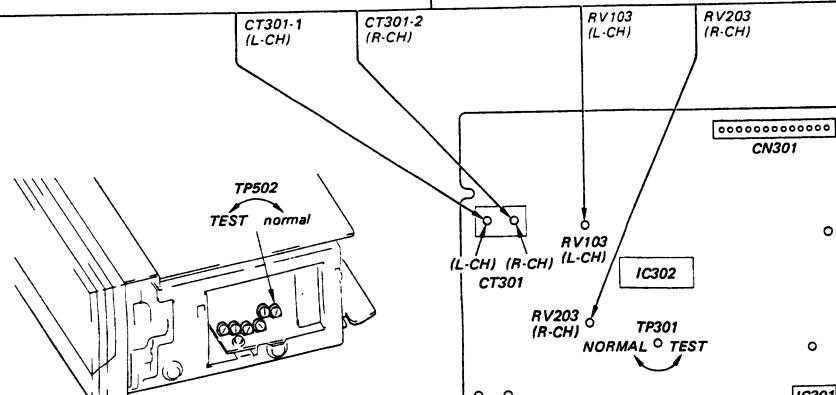
3. Play back the signal recorded in step 1. Confirm that the signal level is within the specification below. If necessary, adjust RV103 (L-CH), RV203 (R-CH) and repeat the steps 1 - 3.

Specification:

PB OUT level: 0.41 to 0.46 V
(-5.5 to -4.5 dB)

4. After adjustment, put TP301, 502 into NORMAL MODE.

Adjustment Location: audio board



[AUDIO BOARD] - Conductor Side -

FH-55W/50WX
TC-55W/50WX

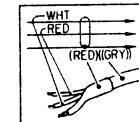
FH-55W/50WX
TC-55W/50WX

4-1. MOUNTING DIAGRAM

• See page TC-13 for Semiconductor Lead Layouts.

Note:

• Color code or sleeving over the end of the jacket.



• ○ : parts extracted from the component side.

• ─ : parts extracted from the conductor side.

• ■ : part mounted on the conductor side.

SEMICONDUCTOR LOCATION

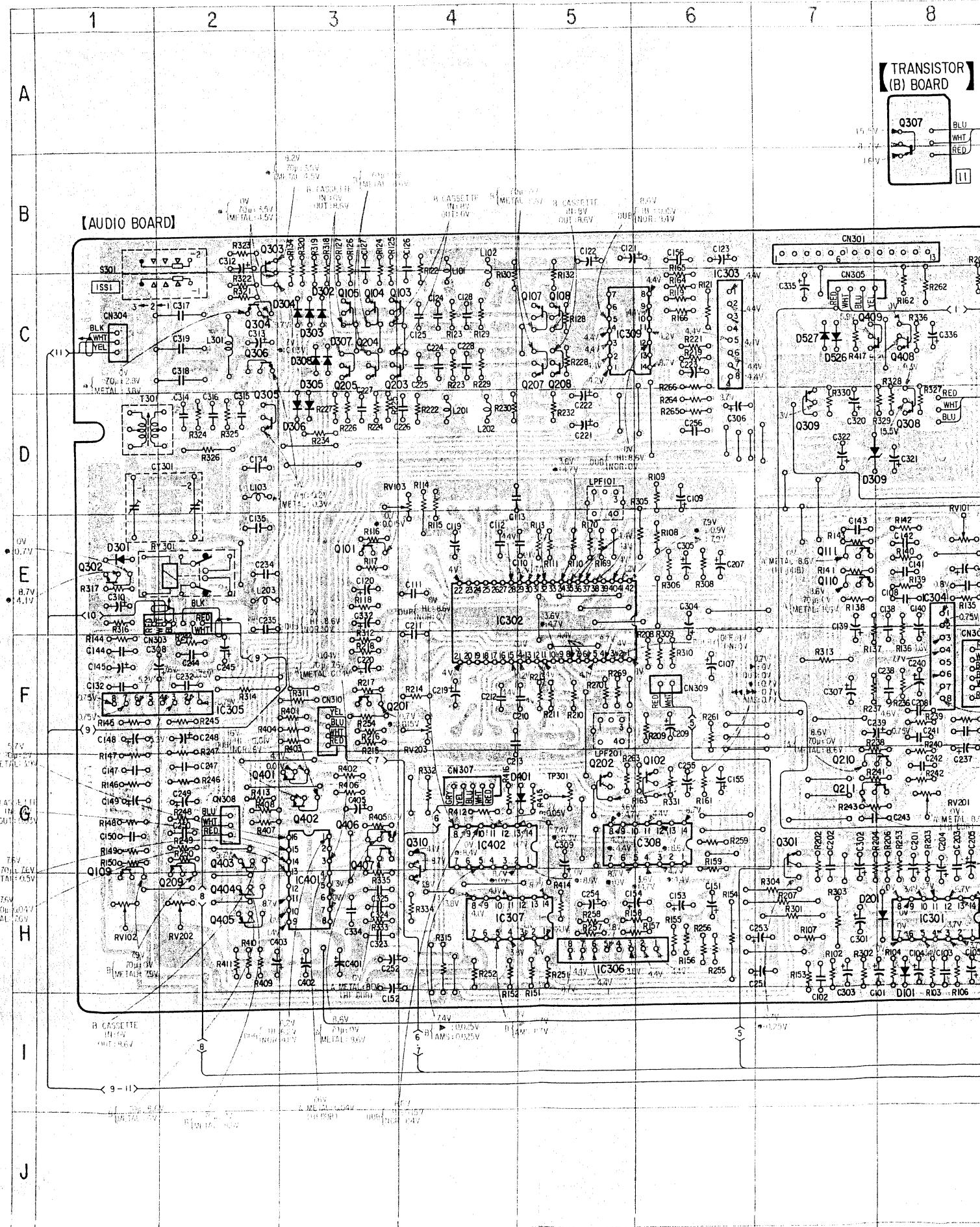
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	H-8	Q101	E-3	Q526	A-12
D201	H-8	Q102	G-6	Q527	B-12
D301	E-1	Q103	C-4	Q528	B-14
D302	C-3	Q104	C-3	Q529	A-14
D303	C-3	Q105	C-3	Q530	C-15
D304	C-3	Q107	C-5	Q531	E-15
D305	D-3	Q108	C-5	Q532	E-15
D306	D-3	Q109	G-1	Q533	E-15
D307	C-3	Q110	E-7	Q534	E-15
D308	C-3	Q111	E-7	Q535	E-14
D309	D-8	Q201	F-3	Q536	D-15
D401	G-5	Q202	G-5	Q537	D-15
D505	E-16	Q203	C-4	Q538	D-15
D506	E-17	Q204	C-3	Q539	D-14
D507	C-17	Q205	C-5	Q540	C-15
D508	A-17	Q207	C-5	Q541	B-12
D509	D-14	Q208	C-5	Q543	B-13
D510	C-15	Q209	G-2	Q544	C-13
D511	C-16	Q210	G-7	Q545	B-11
D512	D-14	Q211	G-7	Q546	B-11
D514	D-14	Q301	G-7	Q547	B-14
D516	B-12	Q302	E-1	Q548	C-12
D517	C-15	Q303	B-2	Q551	
D518	C-10	Q304	C-2		
D519	B-13	Q305	D-2		
D520	C-12	Q306	C-2		
D521	D-11	Q307	A-8		
D522	B-15	Q308	D-8		
D523	C-13	Q309	D-7		
D524	C-12	Q310	G-4		
D525	C-7	Q401	G-3		
D526	C-7	Q403	G-2		
D527	C-7	Q404	H-2		
D601	J-13	Q405	H-2		
D602	J-13	Q406	G-3		
D603	J-13	Q407	C-7		
D604	J-11	Q408	C-7		
D605	H-10	Q409	C-7		
D607	H-10	Q502	D-18		
D608	H-12	Q503	D-18		
D609	H-13	Q504	D-17		
D611	H-11	Q505	C-17		
D613	H-13	Q506	B-17		
D614	H-17	Q507	B-17		
D616	H-15	Q508	B-12		
D617	H-17	Q509	B-10		
IC301	H-8	Q510	B-10		
IC302	E-4	Q511	C-14		
IC303	C-6	Q513	C-15		
IC304	F-8	Q514	E-12		
IC305	F-2	Q515	E-13		
IC306	H-5	Q516	E-13		
IC307	H-4	Q518	E-14		
IC308	G-6	Q519	C-14		
IC309	C-5	Q520	C-14		
IC401	H-3	Q522	B-15		
IC402	G-4	Q523	B-16		
IC501	D-12	Q524	B-15		
IC502	B-11	Q525	B-16		

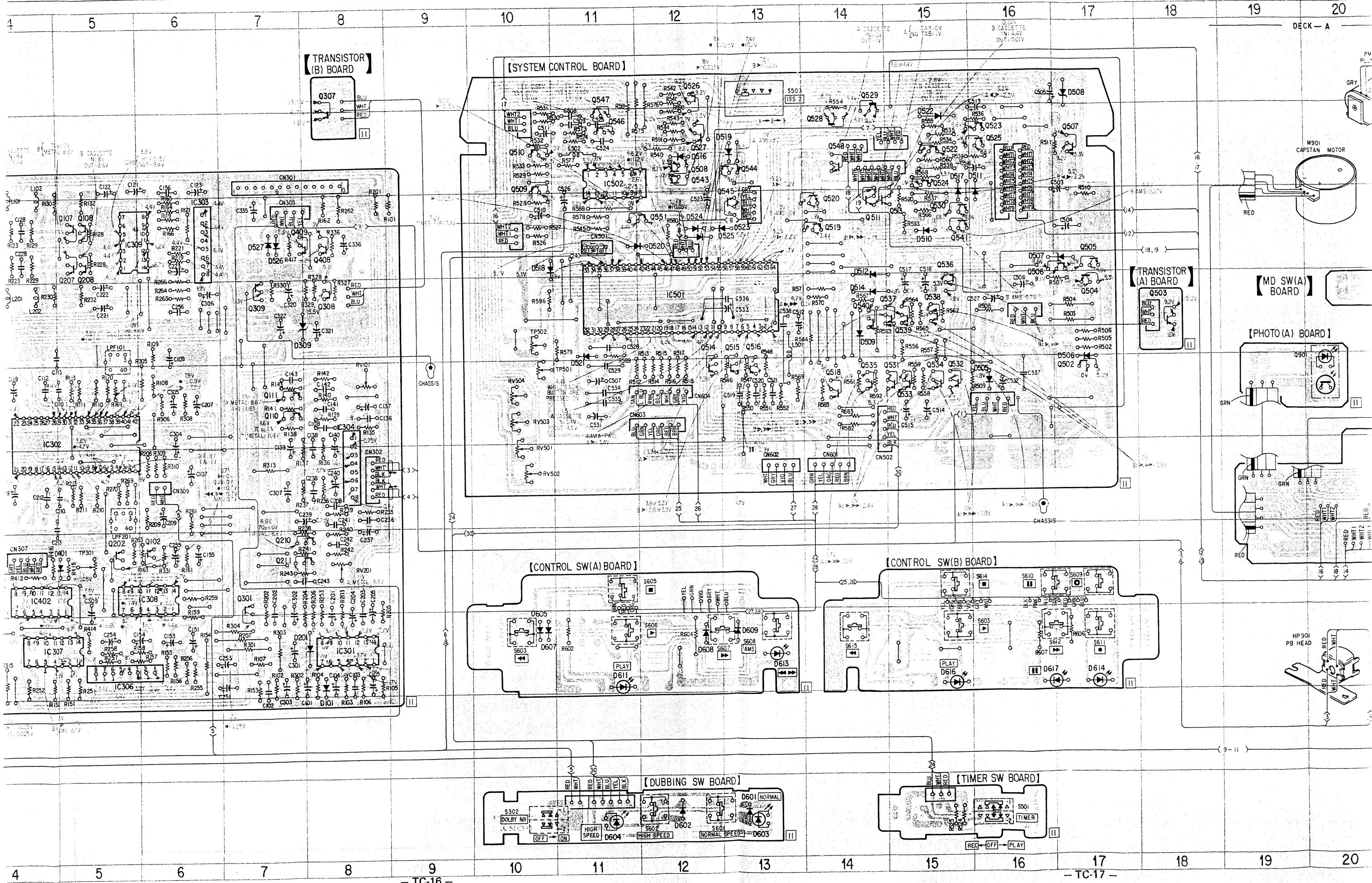
SECTION 4

DIAGRAMS

FH-55W/50WX

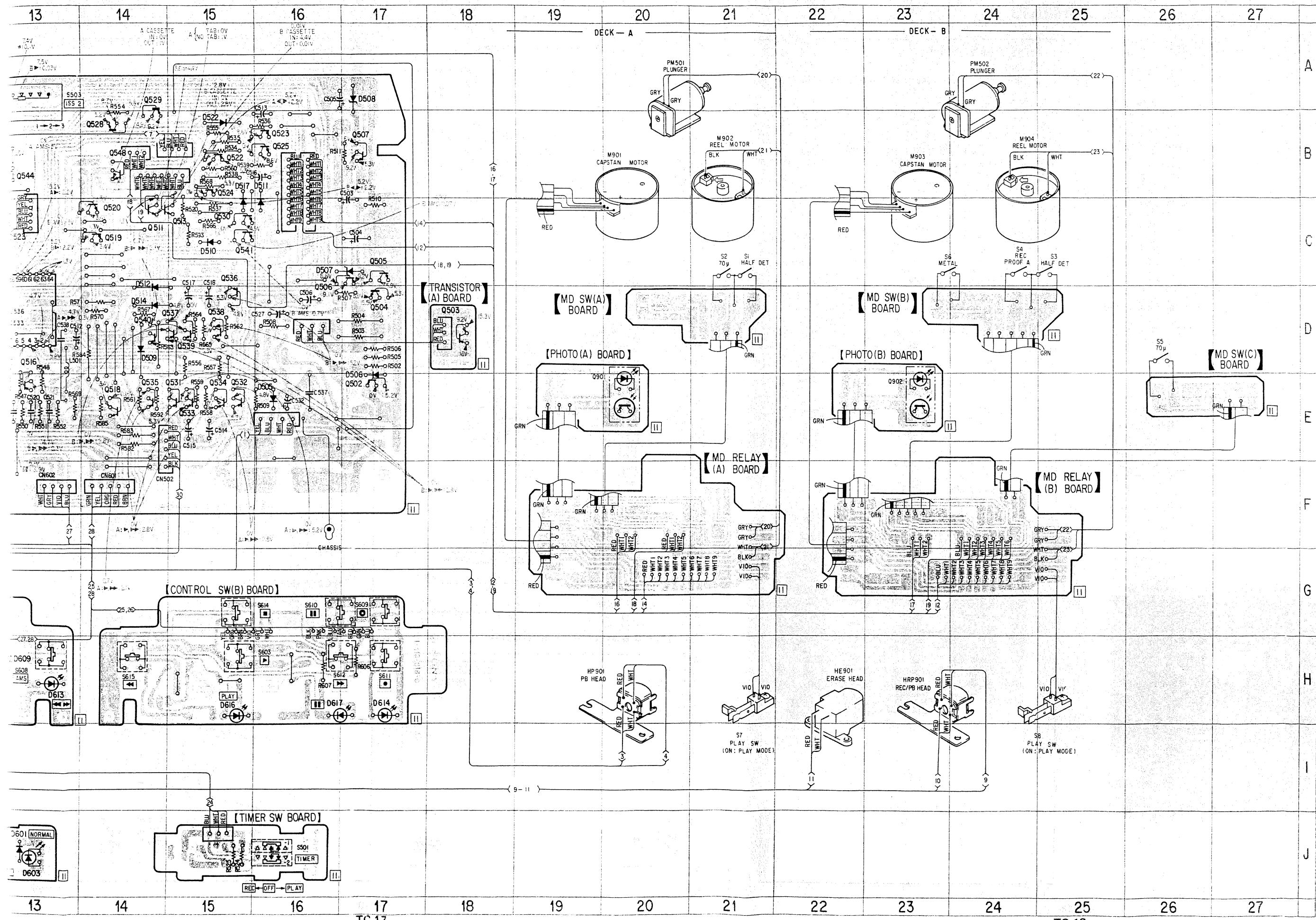
TC-55W/50WX





FH-55W/50WX
TC-55W/50WX

FH-55W/50WX
TC-55W/50WX



4-2. SCHEMATIC DIAGRAM - SYSTEM CONTROL SECTION -

FH-55W/50WX
TC-55W/50WX

FH-55W/50WX
TC-55W/50WX

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A

[SYSTEM CONTROL BOARD]

0547 2SC2603 ISS SELECT
0546 2SC2603

IC502
TC4069UBP
OSC

IC501 M5C
SYSTEM CNT

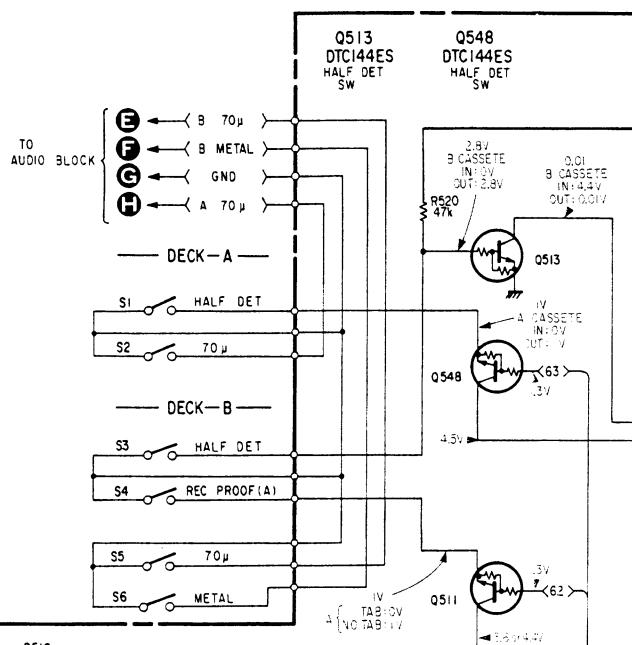
B

[TIMER SW BOARD]

0547 2SC2603 ISS SELECT
0546 2SC2603

IC502
TC4069UBP
OSC

C



[PHOTO(A) BOARD]

IC502
TC4069UBP
INVERTER

0509
2SC2603
TURN DET

0901 (DECK-A)

R526 220
R527 27k
R528 100k

C510 1/50V 0V
R529 10k
IC501 (I/6)
IC502 (I/6)

0509
2SC2603
TURN DET

5.2V

R545 10k

IC501 (I/6)
IC502 (I/6)

0509
2SC2603
TURN DET

5.2V

IC502 (I/6)
IC501 (I/6)

0510 2SC2603
TURN DET

5.2V

IC502 (I/6)
IC501 (I/6)

0510 2SC2603
TURN DET

5.2V

IC502 (I/6)
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0510 2SC2603
TURN DET

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0510 2SC2603
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0510 2SC2603
TURN DET

5.2V

IC502 (I/6)
IC501 (I/6)

0510 2SC2603
TURN DET

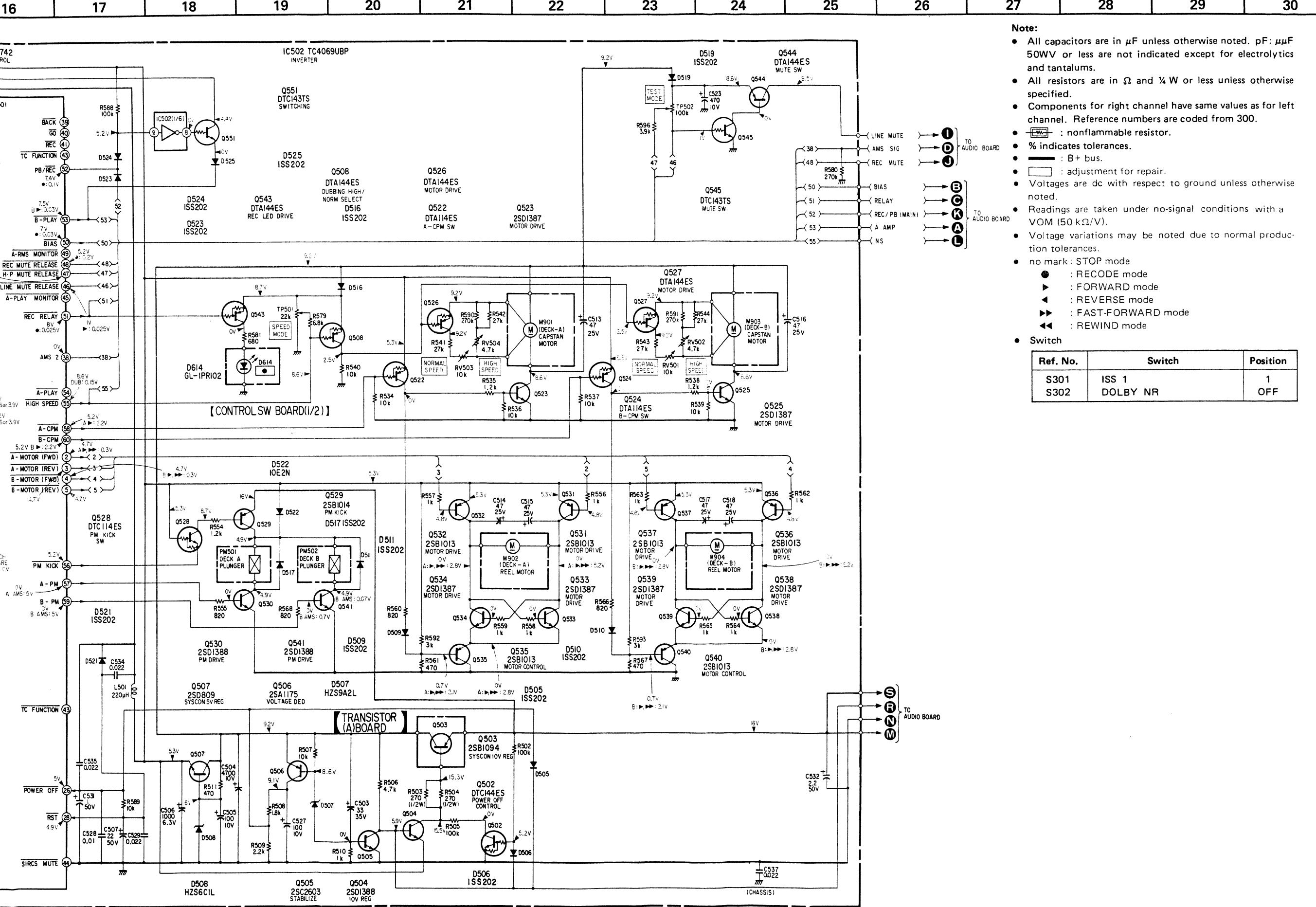
5.2V

IC502 (I/6)
IC501 (I/6)

0510 2SC2603
TURN DET

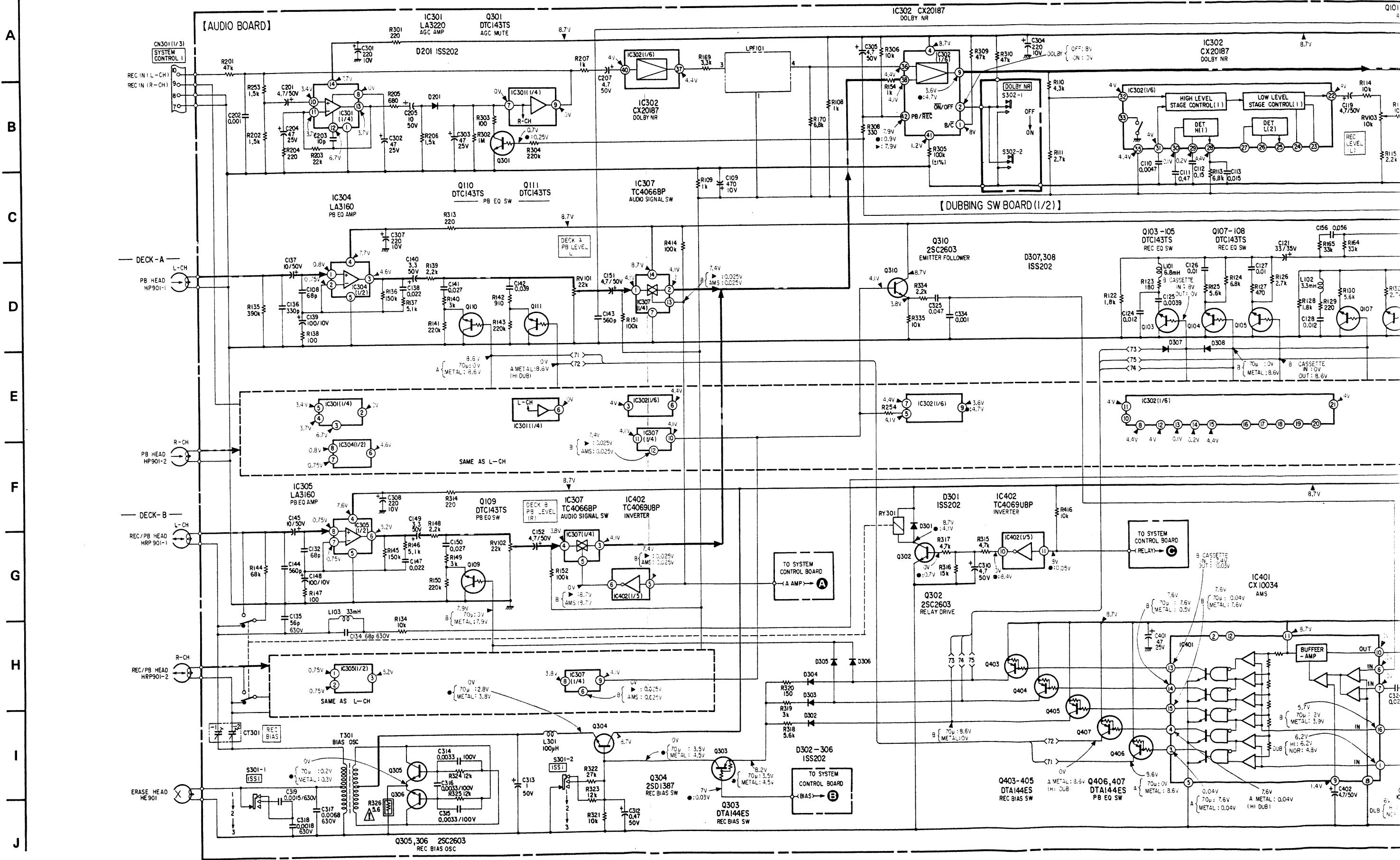
5.2V

FH-55W/50WX **FH-55W/50WX**
TC-55W/50WX **TC-55W/50WX**



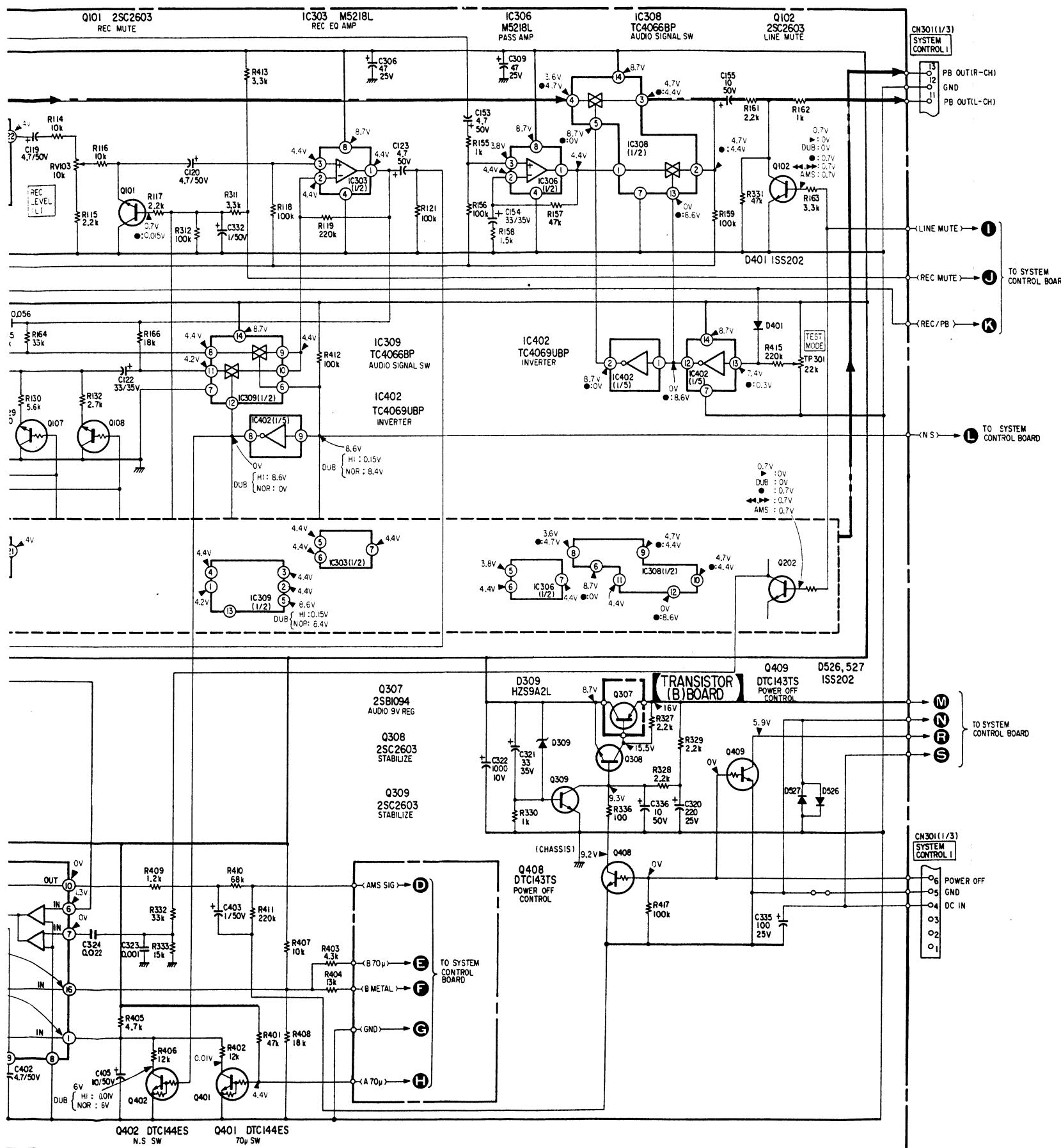
4-3. SCHEMATIC DIAGRAM - AUDIO BOARD SECTION -

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



FH-55W/50WX **FH-55W/50WX**
TC-55W/50WX **TC-55W/50WX**

16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
- Components for right channel have same values as for left channel. Reference numbers are coded from 300.
- \square : nonflammable resistor.
- % indicates tolerances.
- --- : B+ bus.
- $\boxed{\quad}$: adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 k Ω /V).
- Voltage variations may be noted due to normal production tolerances.
- no mark: STOP mode
 - : RECODE mode
 - : FORWARD mode
 - ◀ : REVERSE mode
 - : FAST-FORWARD mode
 - ◀◀ : REWIND mode
 - II : PAUSE mode
- Switch

Ref. No.	Switch	Position
S1	HALF DET/A	OFF
S2	TAPE SELECT 70 μA	OFF
S3	HALF DET/B	OFF
S4	REC PROOF (A)/B	OFF
S5	TAPE SELECT 70 μB	OFF
S6	TAPE SELECT METAL/B	OFF
S7	PLAY SW/A	OFF
S8	PLAY SW/B	OFF
S501	TIMER	OFF
S503	ISS 2	1
S601	DUBBING NORMAL	OFF
S602	DUBBING HIGH	OFF
S603	REW/A	OFF
S605	STOP/A	OFF
S606	PLAY/A	OFF
S607	FF/A	OFF
S608	AMS/A	OFF
S609	REC MUTE/B	OFF
S610	PAUSE/B	OFF
S611	REC/B	OFF
S612	FF/B	OFF
S613	PLAY/B	OFF
S614	STOP/B	OFF
S615	REW/B	OFF

Note: The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- $\text{---} \rightarrow$: signal path.
- $\text{---} \rightarrow$: L-CH signal path.
- $\text{---} \rightarrow$: R-CH signal path.

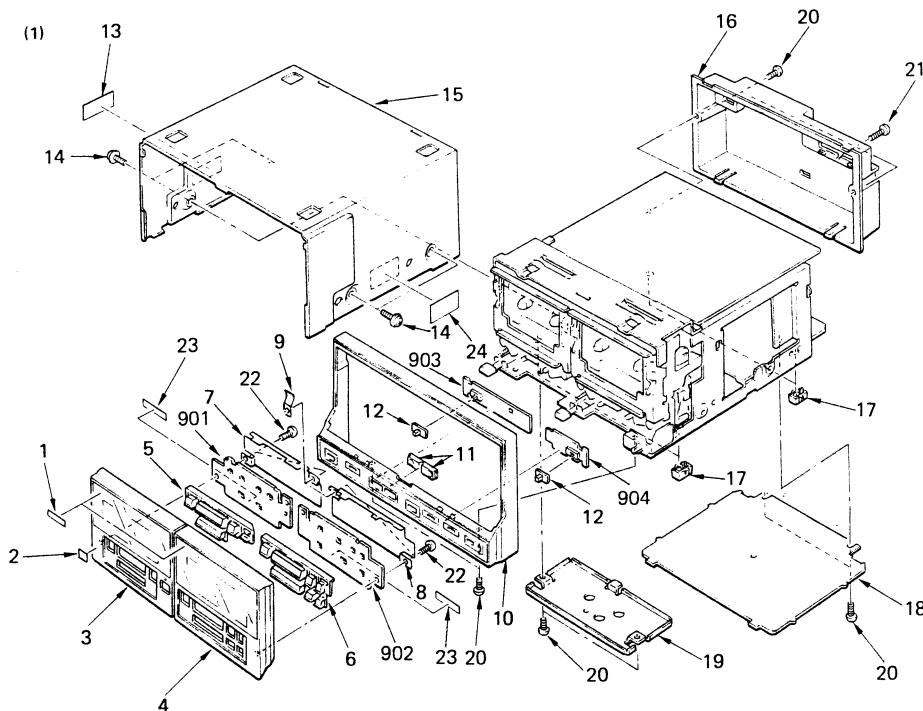
FH-55W/50WX
TC-55W/50WX

SECTION 5
EXPLODED VIEWS AND PARTS LIST

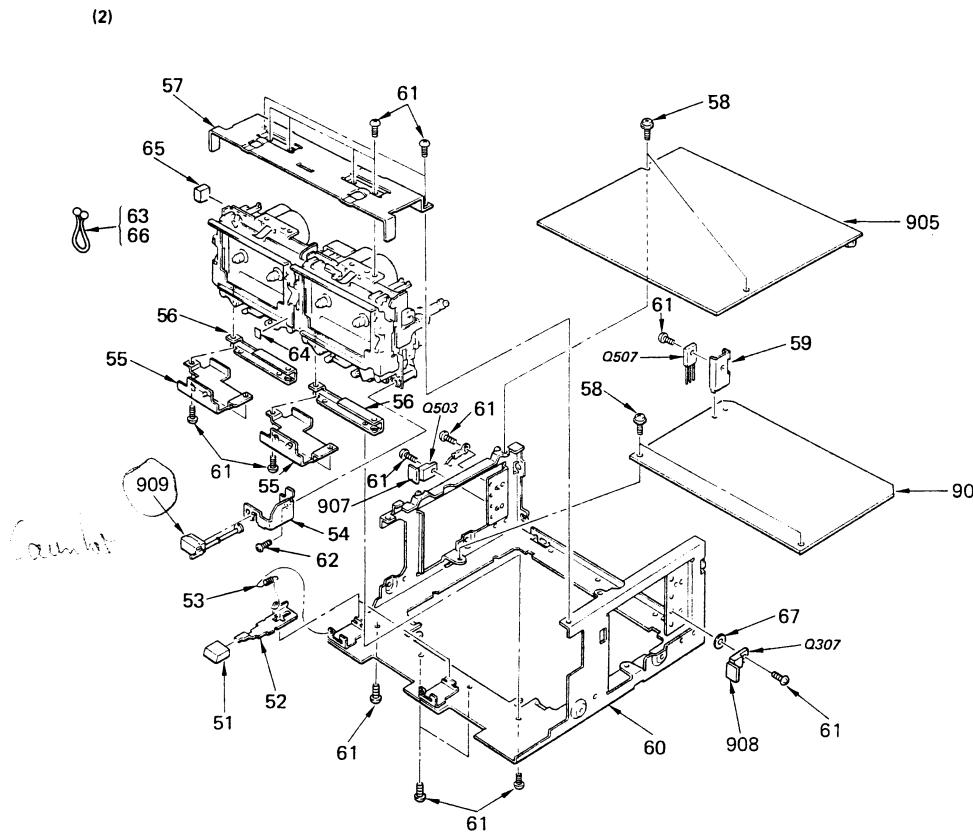
NOTE:
The mechanical parts with no reference number in the exploded views are not supplied.

The construction parts of an assembled part are indicated with a callout number in the remark column.

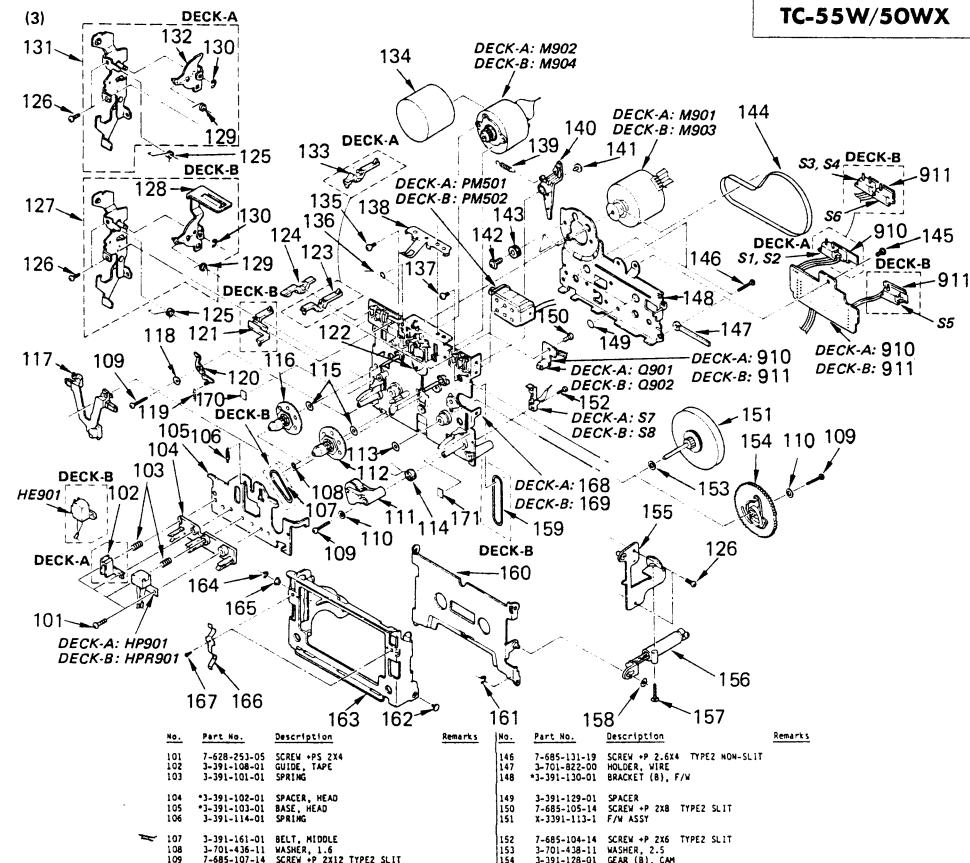
Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-911-673-01	SEAL, COVER		14	4-886-821-01	SCREW, M3 CASE	
2	3-703-713-41	STICKER, SONY SYMBOL (10)		15	3-325-595-01	CASE	
3	X-3325-530-1	LID (A) ASSY, CASSETTE		16	*3-325-561-11	PLATE, JACK	
4	X-3325-526-1	(TC-50WX)...LID (B) ASSY, CASSETTE		17	X-4902-937-1	FOOT ASSY, RUBBER	
	X-3325-531-1	(TC-55W)...LID (B) ASSY, CASSETTE		18	*3-325-594-01	PLATE, BOTTOM	
5	X-3325-544-1	BUTTON, ASSY (A)		19	*3-325-599-01	COVER, WIRING	
7	3-333-801-01	PLATE (A), SHIELD		20	7-685-871-01	SCREW +BVTT 3X6 (S)	
8	3-333-802-01	PLATE (B), SHIELD		21	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
9	3-333-813-01	SPRING (B)		22	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
10	X-3325-532-1	PANEL ASSY, FRONT		23	3-573-629-21	CUSHION (B)	
11	3-325-544-11	BUTTON (B), DUBBING		24	3-703-978-01	(TC-50WX)...LABEL (A), FIRE CAUTION	
12	3-323-415-31	KNOB, SWITCH TIMER		901	*A-2056-336-A	MOUNTED PCB, AUDIO	
13	*3-325-584-01	(TC-50WX)...LABEL, MODEL NUMBER (W)		902	*A-2056-336-A	MOUNTED PCB, AUDIO	
	*3-325-589-01	(TC-55W)...LABEL, MODEL NUMBER (W)		903	*A-2056-336-A	MOUNTED PCB, AUDIO	
				904	*A-2056-336-A	MOUNTED PCB, AUDIO	



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	3-329-952-11	BUTTON, EJECT		64	3-931-441-XX	CUSHION (A)	
52	*3-325-590-01	SLIDER, EJECT		65	9-911-841-XX	CUSHION	
53	3-578-393-00	SPRING, TENSION		66	*2-056-665-00	HOLDER, WIRE (PURCE LOCK 5 DIA)	
54	*3-325-593-01	BRACKET, COUNTER		67	3-572-365-11	SHEET, INSULATING	
55	3-333-818-01	PLATE, SHIELD, HEAD		905	*A-2056-336-A	MOUNTED PCB, AUDIO	
56	*3-325-598-01	BRACKET, MD		906	*A-2056-336-A	MOUNTED PCB, AUDIO	
57	*3-333-803-01	JOINT		907	*A-2056-336-A	MOUNTED PCB, AUDIO	
58	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6		908	*A-2056-336-A	MOUNTED PCB, AUDIO	
				909	1-548-585-31	COUNTER, TAPE (SMALL TYPE)	
59	*3-312-615-31	HEAT SINK					
60	*X-3325-527-1	CHASSIS ASSY (#)		0307	8-729-111-67	TRANSISTOR 2SB1094-L	
61	7-685-871-01	SCREW +BYTT 3X6 (S)		0503	8-729-111-67	TRANSISTOR 2SB1094-L	
62	7-685-104-14	SCREW #P 2X6 TYPE2 NON-SLIT		0507	8-729-180-92	TRANSISTOR 2SD809-K	
63	*3-703-321-01	PURSE LOCK (DIA. 16)					



Part No.	Description	Remarks	Part No.	Description	Remarks
101	7-686-251-05	SCREW +P 2X4	145	7-685-129-15	SCREW +P 2.6X4 TYPEZ NON-SLIT
102	3-391-101-01	SPRING	146	3-701-822-00	HOLDER, WIRE
103	3-391-101-01	SPRING	148	*3-391-130-01	BRACKET (B), F/W
104	3-391-101-02	SPACER, HEAD	149	3-391-129-01	SPACER
105	3-391-101-02	BASE, HEAD	150	7-685-105-40	SCREW +P 2X8 TYPEZ SLIT
106	3-391-114-01	SPRING	151	X-339-113-11	F/W ASSY
107	3-391-161-10	BELT, MIDDLE	152	7-685-104-14	SCREW +P 2X6 TYPEZ SLIT
108	3-701-104-11	WASHER, 1.6	153	3-701-438-11	WASHER, 2.5
109	7-685-104-14	SCREW +P 2X12 TYPEZ SLIT	154	3-391-128-01	GEAR (B), CAM
110	7-686-001-11	W, MIDDLE	155	*3-391-144-01	BRACKET (R), DAMPER
111	X-339-101-01	PINCH ROLLER ASSY	156	*X-339-115-01	DAMPER ASSY
112	X-339-101-07	REL ASSY, T.U	157	7-621-955-75	SCREW, TOTUS P/MW 2X12
113	3-391-119-01	SEAL, WASHER OIL	158	*3-391-148-01	WASHER LOCK
114	3-391-119-01	SPRING (RIGHT)	159	3-391-160-01	BELT, COUNTER
115	3-327-708-11	WASHER	160	3-391-160-01	PLATE, ORNAMENTAL
116	X-339-106-01	REL ASSY	161	7-624-102-04	STOP RING 1.5, TYPE -E
117	X-339-108-01	BRAKE ASSY	162	3-391-152-01	STOP, DOOR
118	3-391-120-01	CALLOR	163	3-391-150-01	HOLDER, CASSETTE
119	3-391-123-01	SPRING (A)	164	7-624-104-04	STOP RING 2.0, TYPE -E
120	3-391-123-01	ARM (B), EJECT	165	3-391-153-01	ROLLER
121	3-391-159-01	LEVER, METAL INSPECTION	166	3-391-151-01	SPRING
122	X-339-111-11	ROLLER ASSY	167	7-685-708-20	SCREW +PTT 2X3 (S)
123	3-391-157-01	LEVER, REC INSPECTION	168	*X-339-101-1	CHASSIS ASSY
124	3-391-131-01	LEVER, PACK INSPECTION	169	X-339-120-20	CHASSIS ASSY
125	3-391-154-01	SPRING (A)	170	*3-333-821-01	CUSHION (LEFT), HOLDER
126	7-685-190-04	SCREW +PTT 2.6X4 (S)	171	3-333-820-01	CUSHION (RIGHT), HOLDER
127	X-339-119-11	ARM ASSY, EJECT	910	1.589-047-11	BLOCK, PC BOARD
			911	1.589-046-11	BLOCK, PC BOARD
128	3-391-158-01	LEVER (B), EJECT	129,130,132	HE001 L-1543-375-11	
129	3-391-146-01	SPRING (B)		HEAD, ERASE (FZ-701-36)	
130	7-624-105-04	STOP RING 2.3, TYPE -E		HMP001 L-1543-374-11	
131	X-339-116-1	ARM ASSY, EJECT		HEAD, RECORD (PP-702-3602)	
132	*3-391-145-01	LEVER (B), EJECT		HRP001 L-1543-374-11	
133	*3-391-155-01	LEVER, CHROME INSPECTION		HEAD, RECORDED (PP-702-3602)	
134	3-391-132-01	PLATE, SHIELD		HMP01 L-1543-428-11	
135	3-391-108-01	SCREW, WASHER		SOLENOID, PLUNGER	
136	3-391-124-01	SPRING		HMP001 L-1543-428-11	
137	7-628-253-95	SCREW +P 2.6X4		SOLENOID, PLUNGER	
138	3-391-101-01	SPRING		SO901 L-1807-509-11	
139	3-391-106-01	SPRING		PHOTO SENSOR	
140	X-339-114-1	ARM ASSY, PLAY		SO902 L-1807-509-11	
141	3-391-126-01	CAP		SWITCH, PUSH (1 KEY)	
142	3-391-147-01	SCREW, MOTOR FITTING		S1 L-1570-720-11	
143	3-391-130-01	MOTOR, CUSHION		SWITCH, PUSH (1 KEY)	
144	3-391-107-01	BELT, MAIN		S2 L-1570-720-11	
145	7-685-781-04	SCREW +BWT 2X4 (S)		S3 L-1570-720-11	
				SWITCH, PUSH (1 KEY)	
				S4 L-1570-720-11	
				SWITCH, LEAF	
				S5 L-1570-723-11	
				SWITCH, PUSH (1 KEY)	
				S6 L-1570-723-11	
				SWITCH, LEAF	
				S7 L-1570-719-11	
				SWITCH, LEAF	
				S8 L-1570-719-11	
				SWITCH, LEAF	
				S9 L-1570-719-11	
				SWITCH, LEAF	
				S10 L-1570-719-11	
				SWITCH, LEAF	
				S11 L-1570-719-11	
				SWITCH, LEAF	
				S12 L-1570-719-11	
				SWITCH, LEAF	
				S13 L-1570-719-11	
				SWITCH, LEAF	
				S14 L-1570-719-11	
				SWITCH, LEAF	
				S15 L-1570-719-11	
				SWITCH, LEAF	
				S16 L-1570-719-11	
				SWITCH, LEAF	
				S17 L-1570-719-11	
				SWITCH, LEAF	
				S18 L-1570-719-11	
				SWITCH, LEAF	
				S19 L-1570-719-11	
				SWITCH, LEAF	
				S20 L-1570-719-11	
				SWITCH, LEAF	
				S21 L-1570-719-11	
				SWITCH, LEAF	
				S22 L-1570-719-11	
				SWITCH, LEAF	
				S23 L-1570-719-11	
				SWITCH, LEAF	
				S24 L-1570-719-11	
				SWITCH, LEAF	
				S25 L-1570-719-11	
				SWITCH, LEAF	
				S26 L-1570-719-11	
				SWITCH, LEAF	
				S27 L-1570-719-11	
				SWITCH, LEAF	
				S28 L-1570-719-11	
				SWITCH, LEAF	
				S29 L-1570-719-11	
				SWITCH, LEAF	
				S30 L-1570-719-11	
				SWITCH, LEAF	
				S31 L-1570-719-11	
				SWITCH, LEAF	
				S32 L-1570-719-11	
				SWITCH, LEAF	
				S33 L-1570-719-11	
				SWITCH, LEAF	
				S34 L-1570-719-11	
				SWITCH, LEAF	
				S35 L-1570-719-11	
				SWITCH, LEAF	
				S36 L-1570-719-11	
				SWITCH, LEAF	
				S37 L-1570-719-11	
				SWITCH, LEAF	
				S38 L-1570-719-11	
				SWITCH, LEAF	
				S39 L-1570-719-11	
				SWITCH, LEAF	
				S40 L-1570-719-11	
				SWITCH, LEAF	
				S41 L-1570-719-11	
				SWITCH, LEAF	
				S42 L-1570-719-11	
				SWITCH, LEAF	
				S43 L-1570-719-11	
				SWITCH, LEAF	
				S44 L-1570-719-11	
				SWITCH, LEAF	
				S45 L-1570-719-11	
				SWITCH, LEAF	
				S46 L-1570-719-11	
				SWITCH, LEAF	
				S47 L-1570-719-11	
				SWITCH, LEAF	
				S48 L-1570-719-11	
				SWITCH, LEAF	
				S49 L-1570-719-11	
				SWITCH, LEAF	
				S50 L-1570-719-11	
				SWITCH, LEAF	
				S51 L-1570-719-11	
				SWITCH, LEAF	
				S52 L-1570-719-11	
				SWITCH, LEAF	
				S53 L-1570-719-11	
				SWITCH, LEAF	
				S54 L-1570-719-11	
				SWITCH, LEAF	
				S55 L-1570-719-11	
				SWITCH, LEAF	
				S56 L-1570-719-11	
				SWITCH, LEAF	
				S57 L-1570-719-11	
				SWITCH, LEAF	
				S58 L-1570-719-11	
				SWITCH, LEAF	
				S59 L-1570-719-11	
				SWITCH, LEAF	
				S60 L-1570-719-11	
				SWITCH, LEAF	
				S61 L-1570-719-11	
				SWITCH, LEAF	
				S62 L-1570-719-11	
				SWITCH, LEAF	
				S63 L-1570-719-11	
				SWITCH, LEAF	
				S64 L-1570-719-11	
				SWITCH, LEAF	
				S65 L-1570-719-11	
				SWITCH, LEAF	
				S66 L-1570-719-11	
				SWITCH, LEAF	
				S67 L-1570-719-11	
				SWITCH, LEAF	
				S68 L-1570-719-11	
				SWITCH, LEAF	
				S69 L-1570-719-11	
				SWITCH, LEAF	
				S70 L-1570-719-11	
				SWITCH, LEAF	
				S71 L-1570-719-11	
				SWITCH, LEAF	
				S72 L-1570-719-11	
				SWITCH, LEAF	
				S73 L-1570-719-11	
				SWITCH, LEAF	
				S74 L-1570-719-11	
				SWITCH, LEAF	
				S75 L-1570-719-11	
				SWITCH, LEAF	
				S76 L-1570-719-11	
				SWITCH, LEAF	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

• Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF:UF, PF:uF.

RESISTORS

• All resistors are in ohms.

• F : nonflammable

COILS

• MMH : mH, UH : LH

SEMICONDUCTORS

In each case, U : L, for example:

UA... : UL..., UPA... : LPA..., UPC... : UPC,

UPD... : UPD...

The components identified by shading and mark are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	*A-2056-336-A	MOUNTED PCB, AUDIO
902	*A-2056-336-A	MOUNTED PCB, AUDIO
903	*A-2056-336-A	MOUNTED PCB, AUDIO
904	*A-2056-336-A	MOUNTED PCB, AUDIO
905	*A-2056-336-A	MOUNTED PCB, AUDIO
906	*A-2056-336-A	MOUNTED PCB, AUDIO
907	*A-2056-336-A	MOUNTED PCB, AUDIO
908	*A-2056-336-A	MOUNTED PCB, AUDIO
909	1-548-585-31	COUNTER, TAPE (SMALL TYPE)
910	1-589-047-11	BLOCK, PC BOARD
911	1-589-046-11	BLOCK, PC BOARD

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C145	1-124-907-00	ELECT
C147	1-136-157-00	FILM
C148	1-124-443-00	ELECT
C149	1-124-905-11	ELECT
C150	1-136-158-00	FILM
C151	1-124-927-11	ELECT
C152	1-124-927-11	ELECT
C153	1-124-927-11	ELECT
C154	1-124-482-11	ELECT
C155	1-124-907-00	ELECT
C156	1-136-162-00	FILM
C201	1-124-927-11	ELECT
C202	1-162-294-31	CERAMIC
C203	1-162-199-31	CERAMIC
C204	1-124-477-11	ELECT
C205	1-124-907-00	ELECT
C207	1-124-927-11	ELECT
C208	1-162-219-31	CERAMIC
C209	1-124-472-11	ELECT
C210	1-110-203-00	MYLAR
C211	1-136-173-00	FILM
C212	1-136-167-00	FILM
C213	1-136-155-00	FILM
C219	1-124-927-11	ELECT
C220	1-124-927-11	ELECT
C221	1-124-482-11	ELECT
C222	1-124-482-11	ELECT
C223	1-124-927-11	ELECT
C224	1-136-154-00	FILM
C225	1-110-202-00	MYLAR
C226	1-136-153-00	FILM
C227	1-136-153-00	FILM
C228	1-136-154-00	FILM
C236	1-162-288-31	CERAMIC
C237	1-124-907-00	ELECT
C238	1-136-157-00	FILM
C242	1-136-160-00	FILM
C243	1-162-291-31	CERAMIC
C244	1-162-291-31	CERAMIC
C245	1-124-907-00	ELECT
C247	1-136-157-00	FILM
C248	1-124-443-00	ELECT
C249	1-124-905-11	ELECT
C250	1-136-158-00	FILM
C251	1-124-927-11	ELECT
C252	1-124-927-11	ELECT
C253	1-124-927-11	ELECT
C254	1-124-482-11	ELECT
C255	1-124-907-00	ELECT
C256	1-136-162-00	FILM
C301	1-124-444-00	ELECT
C302	1-124-477-11	ELECT
C303	1-124-477-11	ELECT
C304	1-124-444-00	ELECT
C305	1-124-927-11	ELECT
C306	1-124-477-11	ELECT
C307	1-124-444-00	ELECT
C308	1-124-444-00	ELECT
C309	1-124-477-11	ELECT
C310	1-124-927-11	ELECT
C312	1-124-902-00	ELECT
C313	1-124-903-00	ELECT
C314	1-130-285-00	FILM
C315	1-130-285-00	FILM
C316	1-130-285-00	FILM
C317	1-130-336-00	FILM
C318	1-129-705-00	FILM
C319	1-130-061-00	FILM
C320	1-124-120-11	ELECT
C321	1-124-482-11	ELECT
C322	1-124-473-11	ELECT
C323	1-162-294-31	CERAMIC
C324	1-136-157-00	FILM
C325	1-136-161-00	FILM
C332	1-124-903-00	ELECT
C334	1-162-294-31	CERAMIC
C335	1-124-478-11	ELECT
C336	1-124-907-00	ELECT
C340	1-124-477-11	ELECT
C401	1-124-477-11	ELECT
C402	1-124-927-11	ELECT
C403	1-124-903-00	ELECT
C405	1-124-907-00	ELECT
C503	1-124-482-11	ELECT
C504	1-124-762-00	ELECT
C505	1-124-443-00	ELECT
C506	1-124-471-00	ELECT
C507	1-124-908-11	ELECT
C508	1-162-217-31	CERAMIC
C509	1-162-219-31	CERAMIC
C510	1-124-903-00	ELECT
C511	1-124-903-00	ELECT
C512	1-124-443-00	ELECT
C513	1-124-477-11	ELECT
C514	1-124-477-11	ELECT
C515	1-124-477-11	ELECT
C516	1-124-477-11	ELECT
C517	1-124-477-11	ELECT
C518	1-124-477-11	ELECT
C519	1-162-306-31	CERAMIC
C520	1-162-306-31	CERAMIC
C521	1-162-306-31	CERAMIC
C523	1-124-472-11	ELECT
C524	1-162-207-31	CERAMIC
C525	1-162-199-31	CERAMIC
C526	1-124-907-00	ELECT
C527	1-162-306-31	CERAMIC
C528	1-162-306-31	CERAMIC
C529	1-161-494-00	CERAMIC
C531	1-124-903-00	ELECT
C532	1-124-257-00	ELECT
C533	1-124-443-00	ELECT
C534	1-161-494-00	CERAMIC
C535	1-161-494-00	CERAMIC
C536	1-161-494-00	CERAMIC
C537	1-161-494-00	CERAMIC
C538	1-161-494-00	CERAMIC
CN301	1-162-068-13	SOCKET, CONNECTOR 13P
CN302	*1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P
CN303	*1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P
CN304	*1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P
CN305	*1-564-507-31	PLUG, CONNECTOR 4P
CN307	*1-564-339-00	PIN, CONNECTOR 5P
CN308	*1-564-337-00	PIN, CONNECTOR 3P
CN309	*1-564-505-11	PLUG, CONNECTOR 2P
CN310	*1-564-338-00	PIN, CONNECTOR 4P
CN311	*1-564-506-13	SOCKET, CONNECTOR 13P
CN312	*1-564-506-11	PLUG, CONNECTOR 5P
CN313	*1-564-506-11	PLUG, CONNECTOR 5P
CN314	*1-564-506-11	PLUG, CONNECTOR 5P
CN315	*1-564-506-11	PLUG, CONNECTOR 5P
CN316	*1-564-506-11	PLUG, CONNECTOR 5P
CN317	*1-564-506-11	PLUG, CONNECTOR 5P
CN318	*1-564-506-11	PLUG, CONNECTOR 5P
CN319	*1-564-506-11	PLUG, CONNECTOR 5P
CN320	*1-564-506-11	PLUG, CONNECTOR 5P
CN321	*1-564-473-11	ELECT
CN322	*1-564-473-11	ELECT
CN323	*1-564-294-31	CERAMIC
CN324	1-136-157-00	FILM
CN325	1-136-161-00	FILM
CN326	1-124-903-00	ELECT
CT301	1-141-225-00	CAP, TUNING, TRIMAR
D101	8-719-911-19	DIODE 1SS119
D201	8-719-911-19	DIODE 1SS119
D301	8-719-911-19	DIODE 1SS119
D302	8-719-911-19	DIODE 1SS119
D303	8-719-911-19	DIODE 1SS119
D304	8-719-911-19	DIODE 1SS119
D305	8-719-911-19	DIODE 1SS119
D306	8-719-911-19	DIODE 1SS119
D307	8-719-911-19	DIODE 1SS119
D308	8-719-911-19	DIODE 1SS119
D309	8-719-933-54	DIODE HZS9A2L
D401	8-719-911-19	DIODE 1SS119
D503	8-719-911-19	DIODE 1SS119
D504	8-719-911-19	DIODE 1SS119
D505	8-719-911-19	DIODE 1SS119
D506	8-719-911-19	DIODE 1SS119
D507	8-719-933-54	DIODE HZS9A2L
D508	8-719-933-39	DIODE HZS6C1L
D509	8-719-911-19	DIODE 1SS119
D510	8-719-911-19	DIODE 1SS119
D511	8-719-911-19	DIODE 1SS119
D512	8-719-911-19	DIODE 1SS119
D513	8-719-911-19	DIODE 1SS119
D514	8-719-911-19	DIODE 1SS119
D515	8-719-911-19	DIODE 1SS119
D516	8-719-911-19	DIODE 1SS119

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D516	8-719-911-19	DIODE ISS119
D517	8-719-911-19	DIODE ISS119
D518	8-719-911-19	DIODE ISS119

ELECTRICAL PARTS

Ref.No.	Part No.	Description
PM501	1-454-428-11	SOLENOID, PLUNGER
PM502	1-454-428-11	SOLENOID, PLUNGER

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q519	8-729-900-74	TRANSISTOR DTC143TS
Q520	8-729-900-80	TRANSISTOR DTC114ES
Q522	8-729-900-61	TRANSISTOR DTA114ES

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R130	1-247-849-00	CARBON
R132	1-249-422-11	CARBON
R134	1-249-429-11	CARBON

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D519	8-719-911-19	DIODE ISS119
D520	8-719-911-19	DIODE ISS119
D521	8-719-911-19	DIODE ISS119

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q101	8-729-606-33	TRANSISTOR 2SC2603F
Q102	8-729-606-33	TRANSISTOR 2SC2603F

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q523	8-729-801-93	TRANSISTOR 2SD1387
Q524	8-729-900-61	TRANSISTOR DTA114ES
Q525	8-729-801-93	TRANSISTOR 2SD1387

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R135	1-247-893-00	CARBON
R136	1-247-883-00	CARBON
R137	1-247-848-00	CARBON

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D522	8-719-200-77	DIODE 1OE2N
D523	8-719-911-19	DIODE ISS119
D524	8-719-911-19	DIODE ISS119

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q104	8-729-900-74	TRANSISTOR DTC143TS
Q105	8-729-900-74	TRANSISTOR DTC143TS

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q526	8-729-900-65	TRANSISTOR DTA144ES
Q527	8-729-900-65	TRANSISTOR DTA144ES
Q528	8-729-900-80	TRANSISTOR DTC114ES

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R138	1-249-405-11	CARBON
R139	1-247-839-00	CARBON
R140	1-247-842-00	CARBON

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D525	8-719-911-19	DIODE ISS119
D526	8-719-911-19	DIODE ISS119
D527	8-719-911-19	DIODE ISS119

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q108	8-729-900-74	TRANSISTOR DTC143TS
Q109	8-729-900-74	TRANSISTOR DTC143TS

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q529	8-729-802-22	TRANSISTOR 2SB1014
Q530	8-729-801-93	TRANSISTOR 2SD1387
Q531	8-729-801-83	TRANSISTOR 2SB1013

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R141	1-247-887-00	CARBON
R142	1-247-830-00	CARBON
R143	1-247-887-00	CARBON

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D601	8-719-911-19	DIODE ISS119
D602	8-719-911-19	DIODE ISS119
D603	8-719-912-41	DIODE TLR124

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q203	8-729-900-74	TRANSISTOR DTC143TS
Q204	8-729-900-74	TRANSISTOR DTC143TS

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q532	8-729-801-83	TRANSISTOR 2SB1013
Q533	8-729-801-93	TRANSISTOR 2SD1387
Q534	8-729-801-93	TRANSISTOR 2SD1387

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R147	1-249-405-11	CARBON
R148	1-247-839-00	CARBON
R149	1-247-842-00	CARBON

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D604	8-719-912-41	DIODE TLR124
D605	8-719-911-19	DIODE ISS119
D607	8-719-911-19	DIODE ISS119

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q207	8-729-900-74	TRANSISTOR DTC143TS
Q208	8-729-900-74	TRANSISTOR DTC143TS

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q538	8-729-801-93	TRANSISTOR 2SD1387
Q539	8-729-801-93	TRANSISTOR 2SD1387
Q540	8-729-801-83	TRANSISTOR 2SB1013

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R153	1-249-419-11	CARBON
R154	1-249-417-11	CARBON
R155	1-249-417-11	CARBON

ELECTRICAL PARTS

Ref.No.	Part No.	Description
HE901	1-543-375-11	HEAD, ERASE (EF-701-36)
HP901	1-543-374-11	HEAD, RECORD (PP-702-3602)
HRP901	1-543-374-11	HEAD, RECORD (PP-702-3602)

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q305	8-729-606-33	TRANSISTOR 2SC2603F
Q306	8-729-606-33	TRANSISTOR 2SC2603F

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q548	8-729-900-89	TRANSISTOR DTC144ES
Q551	8-729-900-74	TRANSISTOR DTC143TS
Q901	1-807-509-11	PHOTO SENSOR
Q902	1-807-509-11	PHOTO SENSOR

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R163	1-249-423-11	CARBON
R164	1-249-435-11	CARBON
R165	1-249-435-11	CARBON

ELECTRICAL PARTS

ELECTRICAL PARTS

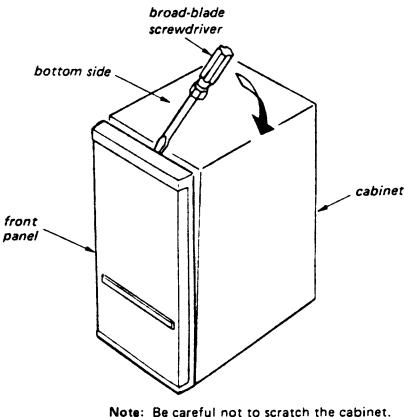
Ref. No. Part No. Description

R224	1-247-851-00	CARBON	6.8K	5%	1/6W
R225	1-247-849-00	CARBON	5.6K	5%	1/6W
R226	1-247-422-11	CARBON	2.7K	5%	1/6W
R227	1-247-823-00	CARBON	470	5%	1/6W
R228	1-247-420-11	CARBON	1.8K	5%	1/6W
R229	1-247-815-00	CARBON	220	5%	1/6W
R230	1-247-849-00	CARBON	5.6K	5%	1/6W
R232	1-247-422-11	CARBON	2.7K	5%	1/6W
R234	1-247-429-11	CARBON	10K	5%	1/6W
R235	1-247-893-00	CARBON	390K	5%	1/6W
R236	1-247-883-00	CARBON	150K	5%	1/6W
R237	1-247-848-00	CARBON	5.1K	5%	1/6W
R238	1-249-405-11	CARBON	100	5%	1/6W
R239	1-247-839-00	CARBON	2.2K	5%	1/6W
R240	1-247-842-00	CARBON	3K	5%	1/6W
R241	1-247-887-00	CARBON	220K	5%	1/6W
R242	1-247-830-00	CARBON	910	5%	1/6W
R243	1-247-887-00	CARBON	220K	5%	1/6W
R244	1-247-875-00	CARBON	68K	5%	1/6W
R245	1-247-883-00	CARBON	150K	5%	1/6W
R246	1-247-848-00	CARBON	5.1K	5%	1/6W
R247	1-249-405-11	CARBON	100	5%	1/6W
R248	1-247-839-00	CARBON	2.2K	5%	1/6W
R249	1-247-842-00	CARBON	3K	5%	1/6W
R250	1-247-887-00	CARBON	220K	5%	1/6W
R251	1-249-441-11	CARBON	100K	5%	1/6W
R252	1-249-441-11	CARBON	100K	5%	1/6W
R253	1-249-419-11	CARBON	1.5K	5%	1/6W
R254	1-249-417-11	CARBON	1K	5%	1/6W
R255	1-249-417-11	CARBON	1K	5%	1/6W
R256	1-249-441-11	CARBON	100K	5%	1/6W
R257	1-249-437-11	CARBON	47K	5%	1/6W
R258	1-249-419-11	CARBON	1.5K	5%	1/6W
R259	1-249-441-11	CARBON	100K	5%	1/6W
R261	1-247-839-00	CARBON	2.2K	5%	1/6W
R262	1-249-417-11	CARBON	1K	5%	1/6W
R263	1-249-423-11	CARBON	3.3K	5%	1/6W
R264	1-249-435-11	CARBON	33K	5%	1/6W
R265	1-249-435-11	CARBON	33K	5%	1/6W
R266	1-249-432-11	CARBON	18K	5%	1/6W
R269	1-249-423-11	CARBON	3.3K	5%	1/6W
R270	1-247-851-00	CARBON	6.8K	5%	1/6W
R301	1-247-704-11	CARBON	220	5%	1/4W
R302	1-247-903-00	CARBON	1M	5%	1/6W
R303	1-249-405-11	CARBON	100	5%	1/6W
R304	1-247-887-00	CARBON	220K	5%	1/6W
R305	1-214-777-00	METAL	100K	1%	1/4W
R306	1-249-429-11	CARBON	10K	5%	1/6W
R308	1-247-819-00	CARBON	330	5%	1/6W
R309	1-249-437-11	CARBON	47K	5%	1/6W
R310	1-249-437-11	CARBON	47K	5%	1/6W
R311	1-249-423-11	CARBON	3.3K	5%	1/6W
R312	1-249-441-11	CARBON	100K	5%	1/6W
R313	1-247-704-11	CARBON	220	5%	1/4W
R314	1-249-425-11	CARBON	4.7K	5%	1/6W
R315	1-249-425-11	CARBON	4.7K	5%	1/6W
R316	1-247-859-00	CARBON	15K	5%	1/6W
R317	1-249-425-11	CARBON	4.7K	5%	1/6W
R318	1-247-849-00	CARBON	5.6K	5%	1/6W
R319	1-247-842-00	CARBON	3K	5%	1/6W
R320	1-247-811-00	CARBON	150	5%	1/6W
R321	1-249-429-11	CARBON	10K	5%	1/6W
R322	1-249-434-11	CARBON	27K	5%	1/6W
R323	1-247-857-00	CARBON	12K	5%	1/6W
R324	1-247-857-00	CARBON	12K	5%	1/6W
R325	1-247-857-00	CARBON	12K	5%	1/6W
R326	1-247-080-00	CARBON	5.6	5%	1/4W F
R327	1-247-839-00	CARBON	2.2K	5%	1/6W
R328	1-247-839-00	CARBON	2.2K	5%	1/6W
R329	1-247-839-00	CARBON	2.2K	5%	1/6W
R330	1-249-417-11	CARBON	1K	5%	1/6W
R331	1-249-437-11	CARBON	47K	5%	1/6W
R332	1-249-435-11	CARBON	33K	5%	1/6W
R333	1-247-855-00	CARBON	15K	5%	1/6W
R334	1-247-839-00	CARBON	2.2K	5%	1/6W
R335	1-249-429-11	CARBON	10K	5%	1/6W
R336	1-249-405-11	CARBON	100	5%	1/6W
R401	1-249-437-11	CARBON	47K	5%	1/6W
R402	1-247-857-00	CARBON	12K	5%	1/6W
R403	1-247-846-00	CARBON	4.3K	5%	1/6W
R404	1-247-858-00	CARBON	13K	5%	1/6W
R405	1-249-425-11	CARBON	4.7K	5%	1/6W
R406	1-247-857-00	CARBON	12K	5%	1/6W
R407	1-249-429-11	CARBON	10K	5%	1/6W
R408	1-249-432-11	CARBON	18K	5%	1/6W
R409	1-247-833-00	CARBON	1.2K	5%	1/6W
R410	1-247-875-00	CARBON	68K	5%	1/6W
R411	1-247-887-00	CARBON	220K	5%	1/6W
R412	1-249-441-11	CARBON	100K	5%	1/6W
R413	1-249-423-11	CARBON	3.3K	5%	1/6W
R414	1-249-441-11	CARBON	100K	5%	1/6W
R415	1-247-887-00	CARBON	220K	5%	1/6W
R416	1-249-429-11	CARBON	10K	5%	1/6W
R417	1-249-441-11	CARBON	100K	5%	1/6W
R502	1-249-441-11	CARBON	100K	5%	1/6W
R503	1-247-226-00	CARBON	270	5%	1/2W
R504	1-247-226-00	CARBON	270	5%	1/2W
R505	1-249-441-11	CARBON	100K	5%	1/6W
R506	1-249-425-11	CARBON	4.7K	5%	1/6W
R507	1-249-429-11	CARBON	10K	5%	1/6W
R508	1-249-420-11	CARBON	1.8K	5%	1/6W
R509	1-247-839-00	CARBON	2.2K	5%	1/6W
R510	1-249-417-11	CARBON	1K	5%	1/6W
R511	1-247-823-00	CARBON	470	5%	1/6W
R512	1-249-425-11	CARBON	4.7K	5%	1/6W
R513	1-249-425-11	CARBON	4.7K	5%	1/6W
R514	1-249-425-11	CARBON	4.7K	5%	1/6W
R515	1-249-425-11	CARBON	4.7K	5%	1/6W
R516	1-249-425-11	CARBON	4.7K	5%	1/6W
R517	1-249-425-11	CARBON	4.7K	5%	1/6W
R518	1-249-425-11	CARBON	4.7K	5%	1/6W
R519	1-249-417-11	CARBON	1K	5%	1/6W
R520	1-247-811-00	CARBON	47K	5%	1/6W
R521	1-249-417-11	CARBON	1K	5%	1/6W
R522	1-249-417-11	CARBON	1K	5%	1/6W
R523	1-249-417-11	CARBON	1K	5%	1/6W
R524	1-249-417-11	CARBON	1K	5%	1/6W
R525	1-249-417-11	CARBON	1K	5%	1/6W
R526	1-247-823-00	CARBON	470	5%	1/6W
R527	1-249-429-11	CARBON	10K	5%	1/6W
R528	1-249-429-11	CARBON	10K	5%	1/6W
R529	1-249-429-11	CARBON	10K	5%	1/6W
R530	1-247-815-00	CARBON	220	5%	1/6W
R531	1-249-434-11	CARBON	27K	5%	1/6W
R532	1-249-441-11	CARBON	100K	5%	1/6W
R533	1-249-429-11	CARBON	10K	5%	1/6W
R534	1-249-429-11	CARBON	10K	5%	1/6W
R535	1-247-833-00	CARBON	1.2K	5%	1/6W
R536	1-249-429-11	CARBON	10K	5%	1/6W
R537	1-249-429-11	CARBON	10K	5%	1/6W
R538	1-249-433-00	CARBON	10K	5%	1/6W
R539	1-249-429-11	CARBON	10K	5%	1/6W
R540	1-249-429-11	CARBON	10K	5%	1/6W
R541	1-249-434-11	CARBON	27K	5%	1/6W
R542	1-249-434-11	CARBON	27K	5%	1/6W
R543	1-249-434-11	CARBON	27K	5%	1/6W
R544	1-249-434-11	CARBON	27K	5%	1/6W
R545	1-249-429-11	CARBON	10K	5%	1/6W
R546	1-247-783-00	CARBON	10	5%	1/6W
R547	1-247-783-00	CARBON	10	5%	1/6W
R548	1-247-783-00	CARBON	10	5%	1/6W
R549	1-249-441-11	CARBON	100K	5%	1/6W
R550	1-249-441-11	CARBON	1.2K	5%	1/6W
R551	1-249-441-11	CARBON	100K	5%	1/6W
R552	1-249-441-11	CARBON	100K	5%	1/6W
R553	1-247-833-00	CARBON	1.2K	5%	1/6W
R554	1-247-829-00	CARBON	820	5%	1/6W
R555	1-247-829-00	CARBON	820	5%	1/6W
R556	1-249-417-11	CARBON	1K	5%	1/6W
R557	1-249-417-11	CARBON	1K	5%	1/6W
R558	1-249-417-11	CARBON	1K	5%	1/6W
R559	1-249-417-11	CARBON	1K	5%	1/6W
R560	1-247-829-00	CARBON	820	5%	1/6W
R561	1-247-823-00	CARBON	470	5%	1/6W
R562	1-249-417-11	CARBON	1K	5%	1/6W
R563	1-249-417-11	CARBON	1K	5%	1/6W
R564	1-249-417-11	CARBON	1K	5%	1/6W
R565	1-249-417-11	CARBON	1K	5%	1/6W
R566	1-247-829-00	CARBON	820	5%	1/6W
R567	1-247-823-00	CARBON	470	5%	1/6W
R568	1-247-829-00	CARBON	820	5%	1/6W
R569	1-249-441-11	CARBON	100K	5%	1/6W
R570	1-249-441-11	CARBON	100K	5%	1/6W
R571	1-249-441-11	CARBON	100K	5%	1/6W
R572	1-249-441-11	CARBON	100K	5%	1/6W
R573	1-247-903-00	CARBON	1M	5%	1/6W
R574	1-249-441-11	CARBON	100K	5%	1/6W
R575	1-249-429-11	CARBON	10K	5%	1/6W
R576	1-249-429-11	CARBON	10K	5%	1/6W
R577	1-249-441-11	CARBON	100K	5%	1/6W
R578	1-249-441-11	CARBON	100K	5%	1/6W
R579	1-247-851-00	CARBON	6.8K	5%	1/6W
R580	1-247-889-00	CARBON	270K	5%	1/6W
R581	1-249-415-11	CARBON	680	5%	1/6W
R582	1-247-808-00	CARBON	110	5%	1/6W
R583	1-247-808-00	CARBON	110	5%	1/6W
R584	1-249-423-11	CARBON	3.3K	5%	1/6W
R585	1-249-429-11	CARBON	10K	5%	1/6W
R586	1-249-441-11	CARBON	100K	5%	1/6W
R587	1-247-833-11	TRANSFORMER, BIAS OSCILLATION			
R588	1-249-441-11	CARBON			

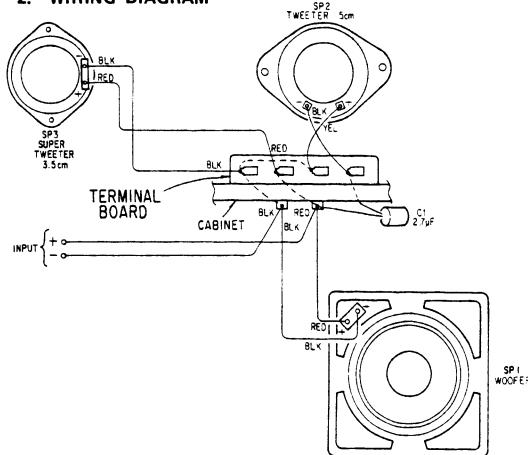
The components identified by shading and mark & are critical for safety. Replace only with part number specified.

SPEAKER SYSTEM (APM-117D)

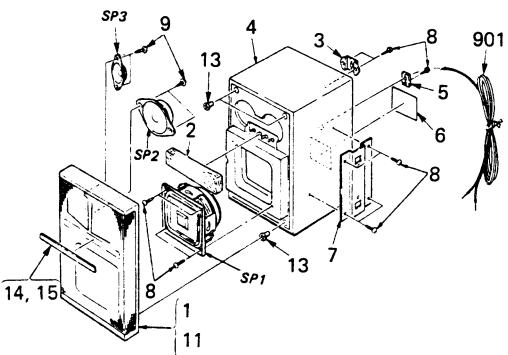
1. DISASSEMBLY FRONT PANEL REMOVAL



2. WIRING DIAGRAM



3. EXPLODED VIEW AND PARTS LIST



Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

No.	Part No.	Description
1	X-4910-066-1	PANEL (LEFT) ASSY, FRONT
2	*4-910-045-01	ABSORBENT (C), ACOUSTIC HOOK
3	*4-883-959-01	
4	X-4910-060-1	CABINET ASSY, SPEAKER
5	*4-914-347-01	CLAMP
6	*4-914-336-01	LABEL, MODEL NUMBER
7	*4-902-981-11	PLATE (B), SIDE
8	4-874-614-11	SCREW (4) 3.5X14, TAPPING
9	7-685-646-71	SCREW +BVT P 3X8 TYPE2 SLIT
11	X-4910-065-1	PANEL (RIGHT) ASSY, FRONT
13	*4-872-922-02	CATCHER
14	4-914-339-01	PLATE (LEFT), ORNAMENTAL
15	4-914-342-01	PLATE (RIGHT), ORNAMENTAL

ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	1-558-547-11	CORD, SPEAKER CONNECTION
C1	1-123-545-00	ELECT 2.7MF 20% 50V
SP1	8-927-269-00	SPEAKER UNIT 070A017
SP2	1-503-590-11	SPEAKER (5CM CONE TYPE)
SP3	1-503-591-11	SPEAKER (3.5CM)

TROUBLE CHECKS

RADIO PROGRAM RECEPTION

The TUNED indication flickers.	• Adjust the antenna.
The STEREO indicator flickers.	• Adjust the antenna.
Severe hum or noise	• The signal strength is too weak. • Adjust the antenna. • Connect the ground wire.

CASSETTE DECK OPERATION

The ● button cannot be activated.	• No cassette in the cassette holder. • The tab is removed from the cassette.
The ● button or ▶ button cannot be activated.	• The tape is wound completely. • The ■ button is activated.
Tape does not move even when the ▶ button is activated (deck B).	• Dirty heads. • Magnetic built-up on the record/playback head.
Recording or playback cannot be made or there is a decrease in sound level.	• No cassette in deck A or B.
The SYNCHRO DUBBING button cannot be activated.	• The tab of the cassette in deck B is removed.
The indicator of the HIGH or NORMAL SYNCHRO DUBBING button blinks.	• The tape is completely wound. • The ■ button is pressed and the ■ indicator lights.
Tape does not move when the SYNCHRO DUBBING button is pressed.	• Contamination of the capstan or pinch roller.
Excessive wow or flutter, or sound drop-out.	• Magnetic built-up on the erase head.
Insufficient erasure.	• Magnetic built-up on the erase head.
Increase of noise of erasure of high frequencies.	• Improper setting of the DOLBY NR switch.
Unbalanced tone in higher frequencies.	• Blank space between the selections may be too short. • Press the AMS/BLINK SKIP button before starting tape motion.

TIMER OPERATION

Radio or taped program sound does not come on at the preset time.	• Check the current time and alarm time. • Confirm that the TIMER standby switch is set to PLAY.
Recording can not be made at the preset time.	• Confirm that the TIMER standby switch is set to REC.

GENERAL

No audio	• Slide the VOLUME control to the right.
No audio from one channel or unbalanced left and right volume	• Adjust the BALANCE control. • Check the speaker connections of the inoperative channel.
Reversed left and right sound	• Check the speaker cord connection and speaker location.
Lack of bass sound or apparently imprecise physical location of musical instruments	• Check the speaker connection for proper phasing.
No microphone sound	• Slide the MIC LEVEL control upwards.
Severe hum or noise	• The TV or VTR is too close to the stereo system. • Separate the stereo system from the TV or VTR.